MEDICAL PROCEEDINGS

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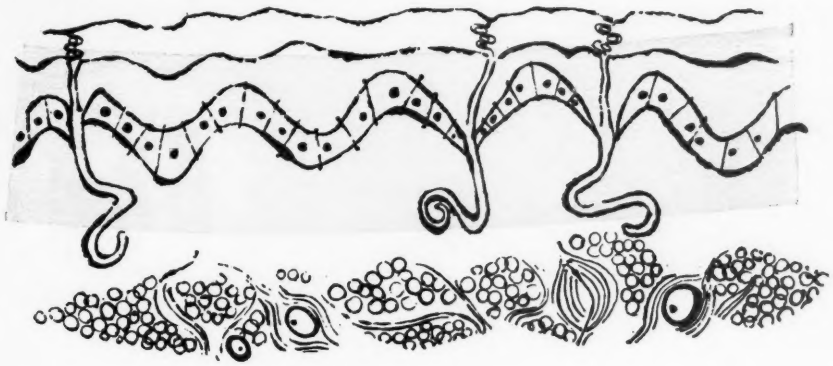

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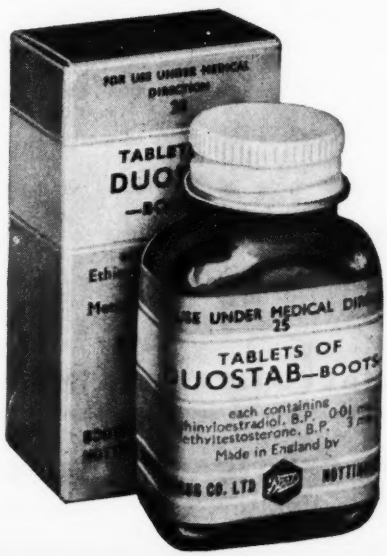

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Medical Proceedings · Mediese Bydraes

Vol. 2 · No. 5 INDEX · INHOUD May 1956 Mei

Pfizer

INTERNATIONAL

medical news bulletin

Current Developments in the Fields of Antibiotics, Hormones, Nutrition and Clinical Medicine

Prepared for Physicians by the Medical Department of Pfizer International, Inc., 25 Broad Street, New York 4, N.Y., U.S.A

Vol. 111, No. 4, 1956

Antibiotics

TERRA-CORTRIL®* ''HIGHLY SUCCESSFUL'' IN SECONDARILY INFECTED DERMATOSES - Terra-Cortril "proved highly successful in causing involution of the lesions in 90 per cent" of a group of 54 patients with various chronic inflammatory dermatoses, chiefly contact (14), seborrheic (8), atopic (9), and anogenital pruritus (7). Leeder,[1] therefore, considers Terra-Cortril Topical Ointment "the treatment of choice in secondarily infected dermatoses and those in which secondary infection is known to be a frequent complication." The ointment, applied 2 or 3 times per day, was "most efficacious in otitis externa" and "of comparable efficacy in anogenital pruritus." "A highly favourable response" in chronic eruptions on the face was also observed.

THE "REMARKABLE EFFICACY" OF TERRAMYCIN®† IN TREATING PERITONITIS caused by a perforated viscus may be due to "the superiority of oxytetracycline over any other antibiotic in activity against Bacteriodes fragilis," suggests Garrod of the Univ. of London.[2] In perforations of the lower bowel B. fragilis organisms are frequently numerous, and in vitro tests by the author show that they are much more resistant to penicillin then either Bacteroides melaninogenicum, which is "very highly sensitive" to penicillin, or than Bacteroides necrophorus. Garrod, therefore, believes that "one of the tetracyclines should be used for infections originating in the lower bowel...."

TERRAMYCIN OTIC‡ EAR DROPS BENEFIT OTITIS EXTERNA, reports Ausband.[3] Of 16 patients with otitis externa or otitis media, treated with Terramycin Otic, 3 drops into each affected ear q.i.d., "those patients with external otitis received the most benefit." Fifteen of 23 draining ears were "cured of infection and rendered dry," and the majority (80%) of 18 ears affected with external otitis were cleared of infection.

CONTINUED USE OF BROAD-SPECTRUMS CHANGES COURSE OF NONBACTERIAL PNEUMONIAS, believe Cronk and Naumann of Syracuse University.[4] In a report on 12 patients with nonbacterial pneumonia and 5 with pneumococcal pneumonia, all of whom were "treated

*Pfizer brand of oxytetracycline combined with hydrocortisone
†Brand of oxytetracycline
‡Brand of oxytetracycline with polymyxin B sulfate and benzocaine

successfully" with 1 Gm. tetracycline/day, authors point out that average hospital stay for nonbacterial pneumonias was 9.49 days from 1940 through 1948 and only 6.25 days from 1949 to 1950. For the same period the average duration of fever in such cases fell from respectively 6.6 days to 2.9 days. In the 12 patients treated with tetracycline in this series the average duration of fever was only 2.0 days. "In our opinion it is the continued use of the various broad-spectrum antibiotics, up to and including tetracycline, which has brought about these tangible changes in the course of nonbacterial pneumonias in our clinic."

TERRAMYCIN "CONSIDERABLY BETTER" THAN PENICILLIN IN MAXILLARY SINUSITIS - Terramycin "produced a considerably better therapeutic result in maxillary sinusitis than penicillin," states Lumio[5] in a report on 208 patients treated with the two antibiotics. Clinical and X-ray examination one week after initiation of treatment "confirmed that 72.6 per cent of the oxytetracylcine-treated patients and 26.5 per cent of the penicillin-treated patients were completely cured." Dosage: oral Terramycin 250 mg./day for 5 days; 450,000 U. procaine penicillin/day for 5 days. Side effects for penicillin were "practically nil"; those for Terramycin, "mild." Author concludes that "in the present material the antibiotic treatment given evidently played a decisive part," but he emphasizes that "maxillary puncture remains a therapeutic measure that cannot be abandoned yet."

SINGLE DOSAGE TERRAMYCIN INTRAMUSCULAR* EFFECTIVE IN GONORRHEA - Ninety-seven male patients with gonorrhea were treated by Braff and colleagues[6] of the San Francisco Dept. of Public Health with a single dose of Terramycin Intramuscular, 200 mgm. in each buttock. "Cure" rate was 90.7%, and authors comment that "not all failures can be attributed to the lack of medicinal effect, as some of these patients undoubtedly represent reinfections." There were no generalized reactions, although a few patients complained of moderate "burning" at the time and site of injection.

ANTIBIOTICS AROUND THE WORLD

INDIA: TETRACYCLINE† "QUICK ACTING AND EFFECTIVE" IN TRACHOMA - "Tetracycline was found to be quick acting and effective in 40 per cent" of 50 patients with trachoma in the infiltrative or follicular stage treated by Agarwal and Malik.[7] Dosage: 250 mg. oral tetracycline q. 6 h. for 8-10 days combined with local application of 1% ointment 2 or 3 times a day. Secondary infection disappeared within 24 hours and subjective symptoms within 2 or 3 days. Authors feel that tetracycline "seems to be of special value in trachomatous keratitis, as the disappearance of corneal lesions only takes about 2 weeks."

SPAIN: TERRAMYCIN IN NEUROSYPHILIS - Terramycin effected a highly satisfactory clinical result in the treatment of an elderly patient with neurosyphilis which had proved resistant to penicillin alone, reports Rey.[8] Patient's dementia disappeared day by day; recuperation of his physical faculties was "rapid and spectacular," and improvement of the remaining symptoms was "equally brilliant." Serology became negative after a second course of penicillin and Terramycin (19 Gm.) given a year after the first treatment. Recommended dosage: 10,000,000 to 12,000,000 U. penicillin within approximately 15 days, followed by 2 Gm. Terramycin/day for 12-15 days.

ITALY: TERRAMYCIN INTRAMUSCULAR AS PREOPERATIVE PREPARATION IN PULMONARY SUPPURATIONS - Terramycine Intramuscular "represents a useful means for preoperative preparation

*Pfizer special dosage formula of oxytetracycline
†Available from Pfizer as Tetracyn®

of patients with chronic pulmonary suppurations..." in the opinion of Provenzale and Zama of the Univ. of Rome.[9] Forty patients with various types of suppuration were treated with oral Terramycin (3 Gm./day) or Terramycin Intramuscular (300 mg./day) for 5 or more days until a marked change of the clinical picture was obtained. Oral administration elicited "excellent clinical results," and Terramycin Intramuscular with a lower dosage gave lower blood levels but same therapeutic effects.

GERMANY: TERRAMYCIN IN CERVICOFACIAL ACTINOMYCOSIS - "...Terramycin is effective against actinomycetes," conclude Holtrichter and Rehrmann[10] in a report on 3 patients with cervicofacial actinomycosis with chronic abscess formation. Terramycin in total dosage of 20-41 Gm. (2-3 Gm. per day) "cured" 2 patients while the third is still under treatment. Therapy should include removal of devitalized teeth or gum pockets.

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HORMONES

SWITZERLAND: PREDNISOLONE, PREDNISONE ACCLAIMED ABROAD - From the Univ. of Geneva[1] comes a confirmation of the "great anti-inflammatory effect" of the two new synthetic steroid hormones. They are recognized to have the same therapeutic range as cortisone but at one-fourth the dosage, and without water and salt retaining effects. Sixteen patients with various diseases, including 4 with lupus erythematosus disseminatus, 3 with bronchial asthma and 3 with severe lumbar arthrosis, were treated with average daily doses of 15-30 mg. prednisone. Treatment was effective in all but one patient with multiple myeloma, and medication was generally well tolerated. It is emphasized that "the absence of water and salt retention facilitates treatment in cardiac, hypertensive and aged patients." [See note below.]

GERMANY: At the Univ. of Mainz,[2] 25 patients in whom anti-inflammatory therapy was indicated were treated with prednisone tablets. Total dosages, given within 3-46 days, were 200-1,050 mg. In this series, prednisone proved to be approximately 3 times as effective, dosage for dosage, as cortisone. The patients were on a normal diet, without potassium supplementation. There were no serious side effects, and no increase in body weight, even after several weeks of therapy. Plasma levels of sodium and potassium remained within normal limits. The "superior anti-inflammatory and antirheumatic effect" of the hormone was particularly noted in 2 patients with severe generalized polyarthritis; on 40 mg./day defervescence occurred within 3 days and range of motion of the joints increased rapidly. The 2 patients

NOTE: Prednisolone supplied by Pfizer as Deltacortril* Tablets, white, scored, 5 mg. Tablets, bottles of 20 and 100, in the familiar Pfizer oval shape.
*Trademark

were then maintained on 15-20 mg. Successfully treated patients included those with chronic joint diseases, bronchial asthma, acute infections with high fever, and infectious hepatitis (the last 2 conditions under simultaneous antibiotic administration).

ITALY: Almost an entire recent issue of the Italian medical journal, Minerva medica,[3] was devoted to reports on the beneficial effects of prednisone in dermatologic conditions, bronchial asthma and rheumatic diseases. The studies originated at the Universities of Turin, Genoa, Florence, Rome and Modena, and in hospitals in Turin and Milan. There was consistent agreement on the excellent tolerance of the hormone, the lack of water retention during therapy, and on its therapeutic effectiveness at dosages 1/3 to 1/5 as large as those of cortisone.

FRANCE: A note from France[4] reiterates the advantages of prednisone over other corticoid hormones, specifically in cases of acute articular rheumatism where suspected Cushing's syndrome forbids use of other steroids, in severe asthma (3 patients), in lupus erythematosus and dermatomyositis (3), adrenal hyperplasia, nephritis, nephrosis and malignant tumors. Another French report[5] tells of improvement in 2 patients with chronic lymphoid leukosis on 20-60 mg./day prednisone. There was "unquestionable" inhibitory effect on the leukemic lymphoid tumor masses. The "indisputable superiority" of prednisone over cortisone with respect to activity and tolerance warrants acceptance of prednisone "into the antileukemic therapeutic gamut."

TERRA-CORTIL® TOPICAL OINTMENT* IN SKIN DISEASES - Terra-Cortril or hydrocortisone ointment alone, 1.0% or 2.5%, produced excellent or good results in 35 of 68 patients with various dermatoses, reports Schlockermann from Berlin.[6] Best responses were obtained in acute "exogenous" allergic dermatitis and eczema. "Here, after 1-2 days of treatment, striking improvement and inhibition of pruritus with marked regression of reddening, edema and exudate were observed. After treatment of 5-7 days at the most, the skin manifestations disappeared either completely or had improved so much that with the usual external remedies a final cure could be obtained." Good results were also obtained in "endogenous" eczema; after 24-48 hours, pruritus decreased and erythematous-squamous skin changes regressed. The ointments were given twice daily at first and after acute inflammatory manifestations subsided, once daily; when continuous administration was required, they were applied every other day.

*Each gram of this specially formulated base contains 1% of hydrocortisone and 3% of oxytetracycline, in 1/6 oz. and 1/2 oz. tubes.

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CLINICAL TRIALS

I. HYDROCORTISONE AND HYDROCORTISONE-NEOMYCIN OINTMENTS

THEIR COMPARATIVE EFFICACY IN VARIOUS ECZEMAS

L. J. A. LOEWENTHAL, M.D., M.R.C.P., D.T.M. & H.

Johannesburg

Much recent work[1-4] has confirmed the original claim of Sulzberger and Witten[5] that hydrocortisone is an effective topical application in many forms of eczema. Many previous series of cases were assessed by the method of simultaneous paired comparisons. This well-established method of comparing two or more topical applications has formed the basis of prolonged investigation by Siemens,[6] who has also detailed its possible sources of error. All such comparisons, including one series published in this country,[7] have shown the undoubted superiority of an ointment containing 1—2.5% of hydrocortisone (or one of its derivatives) over the same ointment base without hydrocortisone, used as a control.

The addition of an antibiotic to hydrocortisone ointment, where bacterial infection is to be treated or prevented, is a reasonable attempt to improve its efficacy and several such combined ointments are on the market. It is desirable that an antibiotic intended for external use should fulfil certain criteria:

(*a*) It must be highly effective against the bacteria commonly found in association with skin lesions;

(*b*) It must not be a powerful sensitizer, i.e. capable of producing eczematous contact-type dermatitis;

(*c*) It should not be commonly used systematically for the treatment of graver conditions (pneumonia, septicaemia, etc.), for fear of producing resistant strains of bacteria on the skin. These might later cause systemic disease, against which the previously used antibiotic would now be ineffective.

Neomycin fulfils the foregoing criteria. Livingood and his co-workers[8] demonstrated its superiority *in vitro* over other antibiotics, against all strains of staphylococci; Forbes,[9] among others, has reported on its efficacy in practice, and Lewin and Loewenthal[10] have shown that it is particularly effective against bacteria cultured from the skin in South Africa. Although it occasionally causes eczematous sensitization,[11] this complication has occurred only once in my experience of many cases treated topically with this antibiotic. Finally, it is rarely used internally.

The present trial, therefore, was made by

comparing the short-term effects of an ointment containing 0.5% of neomycin sulphate and 1% of hydrocortisone acetate (Neo-Cortef) and an ointment of 1% hydrocortisone acetate in the same base, but without neomycin (Cortef).*

METHOD

Patients with symmetrical eczematous lesions were given one 5 gm. tube each of Cortef and Neo-Cortef ointment, and instructed to apply these to comparable areas on the right and left sides. No set scheme was followed, so that in some cases the right, and in others the left side was selected for Neo-Cortef inunction. This precaution was taken to obviate more thorough application on the left side in the predominantly right-handed population. Only such patients (or children's parents) were selected as showed reasonable intelligence and willingness to carry out the test conscientiously, and who could be expected to report back.

Ointments were applied twice daily with the finger tip, using the smallest possible quantity over the largest possible area, and rubbing lightly until no excess was present on the surface.

In order to conserve supplies trials were made for 1 week (6-8 days) in each case.

RESULTS

Adults were asked which ointment they preferred, and their preference entered as a subjective estimate. Objective assessment was made by me in all cases *before* referring to the record, in order to avoid bias in favour of one or other ointment. In most patients subjective and objective improvement ran parallel, except in those who stated that one side had begun to respond sooner than the other, although equal improvement had been attained at the time of re-examination.

Thirty-eight patients reported after one week's trial. All were suffering from eczematous eruptions (detailed in Table 1) and all but one showed 50% or more improvement, subjectively and objectively, on both sides. The exception was a case of nummular eczema, which showed marked improvement with Cortef, and none with Neo-Cortef. I was unable to explain this discrepancy. The results are summarized in Table 1.

COMMENT

No instance of intolerance to either ointment was encountered. The only superiority shown by Neo-Cortef was in cases of atopic dermatitis (including infantile eczema) and bacterial eczema. Even so, the advantage shown by Neo-Cortef in most of these cases was a slight one, and such minor differences in short trials should not be given undue weight.[6] Most of the 8 cases in which Cortef showed superiority can probably be dismissed as due to experimental error, particularly as this superiority was usually manifested subjectively. Naturally a similar explanation must be permitted for some of the cases in which Neo-Cortef produced faster subjective improvement.

SUMMARY

Symmetrical paired comparisons were made in 38 cases of various eczematous eruptions, using ointments of 1% hydrocortisone acetate with and without the addition of 0.5% neomycin.

* Adequate supplies of both ointments were made available by The Upjohn Company, Kalamazoo, Michigan, U.S.A., through Westdene Products (Pty.) Ltd., Johannesburg.

TABLE 1: RESULTS OF PAIRED COMPARISONS WITH CORTEF AND NEO-CORTEF 1% OINTMENTS.

Number of Cases	*Diagnosis*	*Cortef Superior*		*Neo-Cortef Superior*		*Equally Effective*
		Greatly	*Slightly*	*Greatly*	*Slightly*	
4	Infantile eczema (atopic) ..				4	
6	Besnier's prurigo (atopic) ..		1	1	2	2
17	Bacterial eczema (including seborrhoeic)		1	2	6	8
3	Nummular eczema	1	1		1	
4	Contact eczema (nickel, penicillin, antihistaminics		2			2
2	Eczema from heat or light ..	1	1			
2	Disseminated eczema				1	1
38	*Totals*	2	6	3	14	13

The results showed a slight advantage from the addition of neomycin in cases of atopic dermatitis and bacterial eczema.

OPSOMMING

Simmetriese vergelykings wat twee-twee gerangskik is, is gedoen in 38 gevalle van verskillende soorte ekseemagtige uitslag, en salwe bestaande uit 1% hidrokortisoon-asetaat met of sonder die byvoeging van 0.5% neomisien is gebruik.

Die resultate het aangetoon dat die byvoeging van neomisien geringe voordele meegebring het in gevalle van atopiese huidontsteking en bakteriese ekseem.

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II. HYDROCORTISONE ACETATE AND 9α-FLUORHYDROCORTISONE OINTMENTS

THEIR COMPARATIVE EFFICACY IN VARIOUS ECZEMAS

L. J. A. LOEWENTHAL, M.D., M.R.C.P., D.T.M. & H.

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Derivatives of cortisone and hydrocortisone in which the 9α-hydrogen atom has been replaced by a halogen, i.e. fluorine, are known to be more active than the original steroids.[1] In a comparison of topically applied 9α-fluorhydrocortisone and hydrocortisone-free alcohol (equivalent in activity to hydrocortisone acetate), Witten and his co-workers[2] found the former compound to be slightly more effective in equal concentrations. Pharmaceutical firms estimate this superiority to be a tenfold one and consequently make ointments of, for example, 0.1% 9α-fluorhydrocortisone as the equivalent of those containing 1% of hydrocortisone acetate.

This trial was made, by the method of symmetrical paired comparison, with ointments containing respectively 0.1% of 9α-fluorhydrocortisone and 1% hydrocortisone acetate,* in precisely the same way as a previously published therapeutic assay of hydrocortisone ointment with and without the addition of neomycin.[3] The ointment bases were polyethylene and propylene glycols for the hydrocortone ointment, and a predominantly anhydrous lanolin for the 9α-fluorhydrocortisone ointment.

The results are shown in Table 1.

* The substances used were Fludrocortone topical ointment (0.1%) and Hydrocortisone acetate topical ointment (1%), supplied by Merck-Sharp & Dohme International through Mulphico Pharmaceuticals (Pty.) Ltd., Johannesburg.

COMMENT

No instance of intolerance to either ointment was noted. Three patients claimed that the anhydrous lanolin base of the Fludrocortone was more agreeable.

No marked superiority was shown for either remedy. Among the 12 patients who were recorded as responding better to one or other medicament, 7 showed equal improvement objectively after 1 week, but reported quicker subjective relief with one remedy. The results may therefore be interpreted as indicating that 9α-fluorhydrocortisone (0.1%) and hydrocortisone acetate (1%) were of approximately equal value in the present sample.

OPSOMMING

Geen geval van onverdraagsaamheid teenoor of plaaslike Fludrocortone-salf (0.1%) òf plaaslike hidrokortisoon-asetaatsalf (1%) is opgemerk nie. Drie pasiënte het beweer dat die watervrye lanolienbasis van die Fludrocortone aangenamer was.

Die een salf was nie opvallend beter as die ander nie. Onder die 12 pasiënte wat beter op die een

TABLE 1: RESULTS OF PAIRED COMPARISONS WITH 9a—FLUORHYDROCORTISONE AND HYDROCORTISONE ACETATE OINTMENTS

Number of Cases	*Diagnosis*	9a—*Fluorhydrocortisone* 0.1% *Superior*		*Hydrocortisone Acetate* 1% *Superior*		*Equally Effective*	*Equally Ineffective*
		Greatly	*Slightly*	*Greatly*	*Slightly*		
3	Infantile eczema (atopic)				1	2	
9	Besnier's prurigo (atopic)		4	1	1	2	1
3	Bacterial eczema ..				1	2	
1	Nummular eczema..		1				
2	Contact eczema (medicaments)				1	1	
1	Eczema from sunlight		1				
2	Disseminated eczema					1	1
1	Lichen simplex chronicus ..		1				
22	*Totals*	1	7	1	4	8	2

of die ander geneeskundige behandeling gereageer het, het 7 ná 1 week 'n gelykmatige objektiewe verbetering getoon, maar vinniger subjektiewe verligting met een geneesmiddel gerapporteer. Die resultate kan derhalwe vertolk word as 'n aanduiding dat 9α-fluorhidrokortisoon (0.1%) en hidrokortisoon-asetaat (1%) van naasteby dieselfde waarde in hierdie besondere proefneming was.

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EDITORIAL · REDAKSIONEEL

THE MEDICAL COUNCIL

HIGH LIGHTS OF THE MARCH MEETING

THE SPECIALIST REGISTER: INTERIM REPORT

Faced with a deadlock at its previous meeting on the question whether the Specialist Register should be abolished and replaced by a Register of Consultants, the Council referred the matter to a *Special Ad Hoc Committee,* which reported back a recommendation (duly adopted) that the Specialist Register be retained, but that certain restrictions be placed on specialists:

i. *Domiciliary Visiting.* Specialists will visit private homes only at the request of the patient's own general practitioner.

ii. *Report to Patient's General Practitioner.* Whenever a specialist is aware that a patient has a general practitioner, it is incumbent on him to report on the patient to that general practitioner.

iii. *General Practitioner and Routine Treatment.*

DIE GENEESKUNDIGE RAAD

GLANSPUNTE VAN DIE MAART-VERGADERING

DIE SPESIALISTEREGISTER: TUSSENTYDSE VERSLAG

Op sy vorige vergadering het die Geneeskundige Raad voor 'n dooiepunt te staan gekom wat betref die vraag of die Spesialisteregister afgeskaf en deur 'n Register van Konsultartse vervang moet word. Die saak is gevolglik na 'n *Spesiale Ad Hoc-komitee* verwys, wat toe 'n aanbeveling gedoen het (wat behoorlik aangeneem is) dat die Spesialisteregister behou moet word, maar dat sekere beperkings op spesialiste geplaas moet word:

i. *Huisbesoek.* Spesialiste kan private huise alleen besoek as hulle deur die pasiënt se eie geneesheer gevra word om dit te doen.

ii. *Verslag aan die Pasiënt se Geneesheer.* As 'n spesialis bewus daarvan is dat 'n pasiënt 'n eie geneesheer het, is dit sy plig om verslag oor die

A specialist must send a patient to his own general practitioner for routine treatment unless the patient has no general practitioner.

In the course of the debate other requirements were added:

i. *Has the Patient got a General Practitioner?* A specialist will be compelled to ask a patient who comes to him direct whether he has a general practitioner and to refer the patient back to that practitioner.

ii. *Diversion.* If the patient nominates a specialist in the appropriate speciality, it will be incumbent on the general practitioner to send the patient to that specialist.

The *Ad Hoc Committee* was instructed to formulate these suggestions as ethical rules. The results of these deliberations will be communicated to the Council at its next meeting.

CONUNDRUM: WHAT IS A SPECIALIST?

This issue arose acutely on at least two occasions.

i. A registered practitioner, whose name is not listed in the statutory register as a specialist, wrote to the Council to ask whether he could continue to confine his practice to obstetrics and gynaecology 'without making a secret of it'. He also expressed the view that the term 'specialist' had quite erroneously become synonymous with the term 'expert'.

The Council confirmed the resolution of its Executive Committee that this practitioner

'may do what he proposes doing provided he does not practise as a specialist or hold himself out as a specialist; the Executive Committee understands from his letter that he wishes to carry on practice as a general practitioner, and that he intends to refuse all cases except gynaecological and obstetrical cases; if this was his intention, the Committee can see no objection thereto, but desires to direct his attention to note (iii) to rule 1 of the *Rules Regarding Conduct of which the Council may take Cognizance*'.

This note reads:

'A medical practitioner . . . in general practice may restrict his practice to a particular subject of medicine . . . , but is not permitted to circularize his colleagues or other persons to this effect, since this may create the impression that he is a specialist'.

ii. Another registered practitioner, whose name is also not listed in the statutory register as a specialist, wrote to ask whether he could confine his practice to clinical electroencephalography and whether he could advise his colleagues to that effect.

He was also told he could not so advise his colleagues, in view of the provisions of note (iii) to rule 1 on *Advertising.*

The 1954 amendment to section 33 of the Medical, Dental and Pharmacy Act makes it a statutory offence for any registered person to 'practice as a specialist or hold himself out to be a specialist unless his speciality has been registered as prescribed by the Council'. The

pasiënt aan daardie geneesheer te doen.

iii. *Geneesheer en Roetine-behandeling.* 'n Spesialis moet 'n pasiënt vir roetine-behandeling na sy eie geneesheer stuur, tensy die pasiënt geen eie geneesheer het nie.

In die loop van die debat is ander vereistes ook bygevoeg:

i. *Het die Pasiënt 'n eie Geneesheer?* 'n Spesialis is verplig om 'n pasiënt wat regsreeks na hom kom, te vra of hy 'n eie geneesheer het, en om die pasiënt na daardie geneesheer terug te verwys.

ii. *Afwending.* As die pasiënt 'n spesialis in die geskikte spesialiteit benoem, is dit die plig van die geneesheer om die pasiënt na daardie spesialis te stuur.

Die *Ad Hoc-komitee* is gelas om hierdie wenke as etiese reëls te formuleer. Die resultate van hierdie oorwegings sal aan die Raad op sy volgende vergadering voorgelê word.

RAAISEL: WAT IS 'N SPESIALIS?

By ten minste twee geleenthede is hierdie kwessie reeds pertinent te berde gebring.

i. 'n Geregistreerde praktisyn wie se naam nie as spesialis in die statutêre register verskyn nie, het aan die Raad geskryf om te vra of hy kan voortgaan om sy praktyk tot die verloskunde en die ginekologie te beperk ,sonder om 'n geheim daarvan te maak'. Hy het ook die mening uitgespreek dat die woord ‚spesialis' heeltemal verkeerdelik sinoniem geword het met die woord ‚deskundige'.

Die Raad het sy goedkeuring geheg aan die besluit van sy Uitvoerende Komitee, nl. dat hierdie praktisyn

‚kan doen wat hy voornemens is om te doen, met dien verstande dat hy nie as spesialis praktiseer en hom ook nie uitgee as 'n spesialis nie; die Uitvoerende Komitee maak uit sy brief op dat hy verlang om voort te gaan om as algemene praktisyn te praktiseer, en dat hy voornemens is om alle gevalle behalwe ginekologiese en verloskundige gevalle van die hand te wys; as dit sy bedoeling is, het die Komitee geen beswaar daarteen nie, maar die Komitee wil sy aandag bepaal by aantekening (iii) by reël 1 van die *Reëls in verband met gedrag waarvan die Raad kennis kan neem.*'

Hierdie aantekening lui soos volg:

‚'n Geneesheer . . . wat algemene praktyk beoefen, mag sy praktyk beperk tot 'n besondere tak van die geneeskunde . . ., maar hy mag nie sirkulêres in dié verband aan sy kollegas of ander persone rig nie, aangesien dit die indruk kan skep dat hy 'n spesalis is.'

ii. 'n Ander geregistreerde praktisyn wie se naam ook nie as spesialis in die statutêre register verskyn nie, het geskryf om te vra of hy sy praktyk tot kliniese elektro-enkefalografie kan beperk, en of hy sy kolleges hiervan kan verwittig.

Ook hy is meegedeel dat hy sy kolleges nie kan verwittig nie met die oog op die bepalings van aantekening (iii) by reël 1 i.v.m. *Reklame.*

Die 1954-wysiging van artikel 33 van die Wet op Geneeshere, Tandartse en Aptekers

decision whether a practitioner is practising as a specialist or holding himself out as one is therefore now primarily a matter for the courts and not for the Council.

The Council's instruction that a practitioner (who has not had a speciality registered after his name) may not inform his colleagues that he is confining himself to a limited field of practice, clearly rests on the provisions of note (iii) to rule 1 on *Advertising* that by so doing he may create the impression that he is a specialist. But whether this impression has in fact been created is now clearly a matter which only our courts (and not the Council) can decide.

The Council itself, by recent regulation, requires the designation of all specialists to be prefixed by the word 'Specialist . . .'. As a result, general practitioners may now, without risk of offending the Council (and presumably also the courts) apply for and be appointed to posts as surgeons, physicians, paediatricians, anaesthetists, etc. unless the advertisement calls specifically for a registered specialist.

Furthermore, by resolution of the Council at its September 1955 meeting, practitioners not listed as specialists in surgery, medicine or any other speciality, may describe themselves publicly as 'Physician and Surgeon', but not as 'Specialist Physician and Surgeon'.

All these facts make it extremely arguable whether the Council is entitled to instruct general practitioners to limit their communications and define their actions in the manner aforesaid.

Moreover, it should be remembered that the Council does not register *experts* in any field The real problem is whether a practitioner who is in fact expert in any field, shall not only be prevented from informing his colleagues of this fact, but at present also be in jeopardy if he does not keep his expertness secret!

STERILIZATION: THE COUNCIL REVERSES ITSELF

A short time ago the Council resolved that sterilization should only be performed on purely medical grounds, that a confirmatory second opinion was necessary and that the profession should be informed of this position by way of a 'circular letter'. Action was deferred pending discussion of a notice of motion by Dr. Maurice Shapiro (of Johannesburg) to rescind this decision.

In the debate in March 1956, Dr. M. Shapiro pointed out that the effect of the Council's contemplated action was to give semi-legal sanction to an operation which

bepaal dat dit 'n statutêre oortreding sal wees as enige geregistreerde persoon ‚as 'n spesialis praktiseer of hom as 'n spesialis uitgee . . . tensy sy spesialiteit volgens voorskrif van die Raad geregistreer is'.

Die beslissing of 'n praktisyn as 'n spesialis praktiseer of hom as 'n spesialis uitgee, het derhalwe 'n kwessie geword waaroor daar in die eerste en vernaamste plaas deur die howe, en nie deur die Raad nie, beslis moet word.

Die Raad se beslissing dat 'n praktisyn (wat nie as 'n spesialis geregistreer is nie) sy kollegas nie kan verwittig van die feit dat hy hom tot 'n begrensde praktyksfeer gaan beperk nie, berus heel duidelik op die bepalings van aantekening (iii) by reël 1 in verband met *Reklame,* nl. dat hy bes moontlik die indruk kan wek dat hy 'n spesialis is as hy so iets doen. Maar of sodanige indruk inderdaad gewek is, is nou klaarblyklik iets waaroor slegs ons howe 'n beslissing kan gee—en nie die Raad nie.

Kragtens 'n onlangse regulasie dring die Raad self daarop aan dat die betiteling van alle spesialiste voorafgegaan moet word deur die woord ‚spesialis-'. Ten gevolge hiervan kan algemene praktisyns, sonder die gevaar dat hulle aanstoot aan die Raad (en vermoedelik ook aan die howe) sal gee, nou aansoek doen om en aangestel word in betrekkings as chirurge, interniste, kindergeneeshere, narkotiseurs, ens., tensy die advertensie uitdruklik om 'n geregistreerde spesialis vra. Temeer, kragtens 'n besluit wat op 'n vergadering van die Raad in September 1955 aangeneem is, kan praktisyns wat nie as spesialiste in chirurgie, geneeskunde of enige ander spesialiteit geregistreer is nie, hulle in die openbaar as ‚Interniste en Chirurge' beskryf, maar nie as ‚Spesialis-interniste en -chirurge' nie.

Al hierdie feite maak dit hoogs twyfelagtig of die Raad geregtig is om opdragte aan algemene praktisyns te gee wat hul kommunikasies en hul optrede op die hierbo genoemde manier aan bande lê.

Daar moet ook in gedagte gehou word dat die Raad geen *deskundiges* op enige gebied registreer nie. Die werklike probleem is of 'n praktisyn wat inderdaad 'n deskundige op 'n besondere gebied is, nie alleen verbied moet word om sy kollegas van hierdie feit in kennis te stel nie, maar op die oomblik ook in gevaar verkeer as hy sy deskundigheid nie geheim hou nie!

STERILISASIE: DIE RAAD VERANDER VAN MENING

'n Rukkie gelede het die Raad besluit dat sterilisasie slegs om suiwer mediese beweeg-

might not be legal in any circumstances. Far from discouraging the operation, the effect of the resolution would be to open the door wide to this form of mutilation on any grounds for which a genetic or other medical basis could be assumed. There was the further likelihood that the profession would resent a homily from the Council on this subject, since (as matters were at present) every doctor understood full well that he might have to justify his surgical action in a court of law. However desirable it might be for a second opinion to be sought in certain circumstances, it should never be mandatory for a doctor to have to do so. As a registered practitioner, he and he alone, is responsible for his professional decisions.

Whatever ethical pronouncements the Council may make on these matters, they do not affect the liability of a practitioner under the law. The Council should therefore be wary of pronunciamentos which might have the unfortunate effect of confusing practitioners and misleading them about the state of the law.

The reasons which have prompted certain members of the Council to seek publicity for an attack on sterilization, remain obscure. The matter has not been a public issue, except in so far as debates in the Council have made it so. Certainly, in recent years, there has been no single instance of a conviction of a practitioner for performing the operation, nor has there been an epidemic of charges preferred by the authorities against doctors for doing the operation unlawfully.

Dr. A. Radford (of Durban) described the Council's intention very aptly as a 'meddlesome piece of legislation'. Apparently on the principle that second thoughts are best, the wisdom of the March days prevailed and the Council (very properly, in our view) rescinded its 1953 resolution.

There is now no ethical instruction in the matter, which remains a purely legal problem.

EMERGENCY OPERATIONS ON MINORS

Act No. 31 of 1937 (the Children's Act) provides that if a medical officer of the central or provincial government, or of a local authority, think that a child may require medical or operative treatment for which proper consent is necessary and if the parent or guardian refuses this consent, the Minister of Social Welfare may give the necessary consent. In practice doctors have on occasion acted without the consent even of the Minister or his delegated officers, because the procedure was so cumbersome in emergencies.

Representations were made to the Council

redes uitgevoer moet word, dat 'n bevestigende tweede mening noodsaaklik was, en dat die professie deur middel van 'n omsendbrief van hierdie posisie verwittig moet word. Optrede is uitgestel hangende die bespreking van 'n kennisgewing van 'n mosie deur dr. Maurice Shapiro (van Johannesburg) dat hierdie besluit herroep moet word.

In die loop van die debat wat in Maart 1956 plaasgevind het, het dr. M. Shapiro daarop gewys dat die effek van die Raad se voorgestelde optrede sal wees om 'n halfwettige sanksie te verleen aan 'n operasie wat bes moontlik in geen omstandighede hoegenaamd wettig is nie. Verre daarvan dat sodanige operasies ontmoedig word, sal die besluit die deur inderdaad wyd oopstel vir hierdie soort skending op enige grond waarvoor 'n genetiese of ander mediese basis gevind kan word. Daar is ook die verdere waarskynlikheid dat die professie geensins bereid sal wees om te luister na 'n preek oor hierdie onderwerp deur die Raad nie, want (soos sake op die oomblik staan) weet elke dokter maar te goed dat hy sy chirurgiese optrede bes moontlik in 'n hof van die land sal moet regverdig. Hoe wenslik dit in sekere omstandighede ook sal mag wees om 'n tweede mening in te win, behoort 'n dokter nooit verplig te word om dit te doen nie. As 'n geregistreerde praktisyn is hy en hy alleen verantwoordelik vir sy professionele beslissings.

Watter etiese uitsprake die Raad ook al oor hierdie sake mag gee, affekteer hulle nie die aanspreeklikheid van 'n praktisyn kragtens die landswette nie. Die Raad behoort derhalwe te waak teen verklarings wat die ongelukkige uitwerking kan hê om praktisyns te verwar en hulle te mislei vir sover dit die regsposisie betref.

Die redes wat sekere lede van die Raad genoop het om publisiteit te soek vir 'n aanval op sterilisasie bly duister. Die aangeleentheid is nie 'n openbare probleem nie—behalwe in soverre die debatte in die Raad dit 'n openbare probleem gemaak het. In die afgelope paar jaar was daar trouens geen enkele geval waar 'n praktisyn deur 'n hof gestraf is omdat hy die operasie uitgevoer het nie; nog minder was daar 'n stortvloed van aanklagte deur die owerheid teen dokters omdat hulle die operasie op 'n onwettige manier gedoen het.

Dr. A. Radford (van Durban) het die Raad se voorneme nogal paslik as 'n ‚bemoeisieke stukkie wetgewing' bestempel. Afgaande blykbaar op die beginsel dat dit altyd raadsaam is om twee maal oor 'n saak na te dink, het die verstandigheid wat gedurende die Maart-dae

for support to amend the Act so that practitioners would be adequately protected in cases of this kind. In the debate it was clearly pointed out that no undue impediment exists at present in the way of emergency treatment. No action has ever been taken nor is it likely that it would be taken, where a doctor has acted *bona fide* in a crisis. The present state of affairs was, indeed, a better form of protection for the public and a more adequate discipline of the profession, in so far as this is required. Legislation is redundant and might even open the way to abuse.

The matter was referred to the Executive Committee for further consideration in the light of the debate.

DISPENSING BY DOCTORS

The Pharmaceutical Society of South Africa elected to take unilateral action and make direct representations to the Minister of Health for an amendment to the Act to 'preclude doctors from dispensing in the course of their private practice if there is a chemist or druggist carrying on business as an open pharmacy within 5 miles of any point at which the doctor carries on practice'. The Pharmacy Board supported this plea.

The Council had previously resolved that medical practitioners should not place themselves in economic competition with pharmacists, but it could not agree to any encroachment on a medical practitioner's right to do his own dispensing. The Council now reaffirmed that it was 'in favour of maintaining the inherent right of medical practitioners to dispense, as provided in section 73 of the Medical, Dental and Pharmacy Act'.

During the debate a very proper and dignified protest was registered against the tenor of articles in the *South African Pharmaceutical Journal* and the unwarranted and wholesale condemnation of the medical profession by a presumably self-appointed pharmaceutical spokesman.

We would add that this kind of comment, in the official organ of the Pharmaceutical Society of South Africa, seemed to us most ill-advised at a time when the matter was under discussion and negotiation; when, in a sense, it was *sub judice*.

As we pointed out in an Editorial in our April issue on *Acts Specially Pertaining to the Medical Calling* we, as a profession, must be wary of depriving ourselves of our own rights and privileges, when extending to others rights which are or may be essentially medical.

aan die dag gelê is, die oorhand behaal, en die Raad het heeltemal ten regte, volgens ons mening, sy 1953-besluit herroep.

Daar is tans geen etiese instruksies oor hierdie saak nie, en dit bly 'n suiwere regsprobleem.

NOODOPERASIES OP MINDERJARIGES

Wet Nr. 31 van 1937 (die Kinderwet) bepaal dat as 'n mediese amptenaar van die sentrale of die provinsiale regering, of van 'n plaaslike bestuur, die mening toegedaan is dat 'n kind mediese behandeling of 'n operasie moet ondergaan waarvoor behoorlike verlof nodig is, en as die ouer of voog weier om sodanige verlof te gee, die nodige toestemming deur die Minister van Sosiale Welsyn gegee kan word. In die praktyk het geneeshere reeds meermale sonder die toestemming selfs van die Minister of sy benoemde amptenare gehandel om die eenvoudige rede dat die voorgeskrewe prosedure in noodgevalle te omslagtig is.

Vertoë is tot die Raad gerig om sy steun toe te sê aan pogings om die Wet te wysig sodat mediese praktisyns behoorlik beskerm sal wees in gevalle van hierdie aard. Tydens die debat is daar ten regte daarop gewys dat daar op die oomblik geen onbehoorlike beletsels in die weg van noodbehandeling bestaan nie. Waar 'n dokter *bona fide* in 'n krisis opgetree het, is geen stappe nog ooit gedoen nie, en dit is ook hoogs onwaarskynlik dat stappe in die toekoms gedoen sal word. Die huidige toestand van sake bied die publiek derhalwe doeltreffender beskerming, en onderwerp die professie aan doelmatiger dissipline, in soverre sodanige dissipline nodig is. Wetgewing is oorbodig, en kan selfs tot misbruike aanleiding gee.

Met die oog hierop is die aangeleentheid vir verdere oorweging na die Uitvoerende Komitee verwys.

TOEBEREIDINGSWERK DEUR GENEESHERE

Die Aptekersvereniging van Suid-Afrika het verkies om eensydige stappe te doen en om regstreekse vertoë tot die Minister van Gesondheid te rig in verband met 'n wysiging van die Wet wat ‚dokters sal verbied om toebereidingswerk in die loop van hul private praktyk te doen as daar 'n apteker of drogis is met 'n oop aptekerssaak binne 5 myl van enige plek waar die dokter sy praktyk voortsit.' Die Aptekersraad het sy steun aan hierdie pleidooi toegesê.

Die Raad het reeds by 'n vorige geleentheid besluit dat mediese praktisyns nie ekonomies met aptekers moet meeding nie, maar hy kon nie sy toestemming verleen tot enige inbreuk op 'n mediese praktisyn se reg om sy eie toebereidingswerk te doen nie. Die Raad het nou opnuut bevestig dat ‚hy ten gunste is van die handhawing van die mediese praktisyn se inherente reg om toebereidingswerk te doen, soos neergelê in artikel 73 van die Wet op Geneeshere, Tandartse en Aptekers.'

Tydens die debat is daar op 'n behoorlike en waardige wyse protes aangeteken teen die strekking van artikels in die *Suid-Afrikaanse Tydskrif vir die Apteekwese* en die ongeoorloofde en grootskeepse veroordeling van die mediese professie deur wat vermoedelik 'n selfaangestelde woordvoerder van die apteekwese is.

DISPUTED PRIVATE FEES: PAYMENT OF ASSESSORS

A suggestion from the Registrar of the Council to its Executive Committee was approved by the Council that, in view of the preliminary work done by the Assessors, they be paid one day's fee as a preparation fee, and one day's fee for attending the meeting of the Assessors. Special cases can be considered on their merits. Councillor's fees for assessing accounts may now be doubled—and impose a further burden on the profession in respect of the Council's activities.

The duties of the Registrar are defined in par. 71 of the *Rules Relating to the Conduct of Business of the Council* as follows:

'The Registrar shall fulfil all the duties devolving upon or that may be required of him by law, the standing orders, or by resolution of the Council, and as such shall be the chief administrative official of the Council. He shall be responsible for the proper conduct of the Council's business and shall have general control of the management of the office, authority over the clerks and servants and superintendence of the offices; he shall attend all ordinary and special meetings and, whenever possible, meetings of committees, and shall take and keep minutes of the proceedings at such meetings.'

Nowhere in this paragraph can we find authority for the Registrar's action in making a suggestion regarding remuneration of members of the Council.

Apart from the unusual way in which this matter was initiated, the principle involved is fundamental. Taken to its logical conclusion, this would justify the payment of members of the Council for scrutinizing the papers for a full meeting of the Council or of any of its Committees. (The papers alone, for the March meeting, weighed nearly a stone. Must the value of the necessary preliminary study of these documents now be translated from pounds avoirdupois to pounds sterling?)

CHIROPRACTIC: THE COUNCIL'S MAGNIFICENT STATEMENT OF THE PROFESSION'S SCIENTIFIC CREDO

The South African Manipulative Practitioners Association approached the Minister of Labour to amend the Workmen's Compensation Act to give full recognition to manipulative practitioners for certification and treatment in compensation cases. The Minister referred this matter to the Workmen's Compensation Commissioner who, in turn, very properly referred the matter to the Medical Council.

The Council informed the Workmen's Com-

Hieraan wil ons graag toevoeg dat hierdie soort kommentaar in die amptelike mondstuk van die Aptekersvereniging van Suid-Afrika volgens ons mening taamlik onbesonne is op 'n tydstip wanneer die hele aangeleentheid onder bespreking is; wanneer, in 'n sekere sin, dit miskien as *sub judice* bestempel kan word.

In 'n inleidingsartikel oor *Dade wat Spesiaal Betrekking op die Mediese Beroep het*, wat in ons April-uitgawe verskyn het, het ons gesê dat ons, as professie, op ons hoede moet wees dat ons onsself nie beroof van ons eie regte en voorregte wanneer ons aan ander mense regte verleen wat essensieel medies is, of medies kan wees nie.

DISPUTE OOR PRIVATE DOKTERSGELDE: BETALING VAN ASSESSORE

Die Raad het sy goedkeuring geheg aan 'n suggestie wat deur die Registrateur van die Raad aan die Uitvoerende Komitee voorgelê is, nl. dat met die oog op die voorlopige werk wat deur die assessore gedoen word, een dag se gelde by wyse van 'n voorbereidingshonorarium aan hulle betaal moet word, sowel as 'n dag se geld vir die bywoning van die vergadering van assessore. Spesiale gevalle kan dan volgens hul meriete oorweeg word. Die honorarium van Raadslede vir die vasstelling van rekeninge kan nou verdubbel word—waardeur 'n verdere las op die professie gelê word ten opsigte van die Raad se bedrywighede.

Die pligte van die Registrateur word soos volg omskryf in paragraaf 71 van die *Reglemente Betreffende die Behandeling van die Sake van die Raad*:

,Die registrateur moet al die pligte nakom wat volgens wet, die reglement of besluit van die Raad, op hom rus of van hom vereis mag word, en as sodanig is hy die hoofadministerende beampte van die Raad. Hy is verantwoordelik vir die behoorlike reëling van die werksaamhede van die Raad en hy het die algemene beheer van die Kantooraangeleenthede, gesag oor die klerke en bediendes en opsig oor die kantore; hy moet alle gewone en buitengewone vergaderings bywoon en, wanneer moontlik, komiteevergaderings, en die notule van die verrigtings van dergelike vergaderings hou.'

Nêrens in hierdie paragraaf vind ons enige regverdiging vir die Registrateur se optrede, en sy suggestie in verband met die vergoeding van lede van die Raad nie.

Afgesien van die buitengewone manier waarop hierdie aangeleentheid van stapel gestuur is, is 'n fundamentele beginsel by die saak betrokke. Deurgevoer tot sy logiese konklusies sou dit die betaling regverdig van lede van die Raad vir die nalees van die dokumente vir 'n voltallige vergadering van die Raad, of van enigeen van sy komitees. Die dokumente vir die Maart-vergadering het byna veertien pond geweeg. Moet die waarde van die nodige voorafgaande bestudering van hierdie dokumente nou van ponde avoirdupois in ponde sterling omgesit word?

CHIROPRAKTYK: DIE RAAD SE MANJEFIEKE UITEENSETTING VAN DIE PROFESSIE SE WETENSKAPLIKE CREDO

Die Suid-Afrikaanse Vereniging van Manipulasiepraktisyns het vertoë tot die Minister van Arbeid gerig om die Wet op die Skadeloosstelling van Werkliede te wysig sodat volle erkenning aan manipulasiepraktisyns verleen kan word vir sover dit die sertifisering en behandeling van kompensasiegevalle

pensation Commissioner that:

'The Council accepts the doctrines of scientific medicine where all theories of the causation and treatment of disease are constantly subjected to critical scientific analysis and research. The Council does not accept the concept on which chiropractors base diagnosis and treatment; their theories of the aetiology of disease are demonstrably false and at complete variance with the concept of scientific medicine. As the Council has a public duty to perform and has to advise the Legislature on the best form of medical practice, it would regard any recognition of this group under the proposed legislation, or any other legislation, as a retrograde step. To the general public, rightly or wrongly, statutory recognition of chiropractors will convey some kind of parliamentary guarantee of the validity of the principles underlying this sect. This applies not only to recognition under the Workmen's Compensation Act, but to recognition under any other Bill.

The Council does not regard these persons as supplementing the services of medical practitioners or of the groups of recognized auxiliaries. They supplant, or endeavour to supplant them. From the point of view of logic a case cannot consequently be made for their recognition under the Workmen's Compensation Act.'

REPRESENTATION ON THE MEDICAL COUNCIL

It was decided to recommend to the Minister that if he amend the Act to increase the representation of elected medical practitioners on the Council by 4 (as previously resolved by the Council), the apportionment of representatives should be a maximum of 5 elected members for any one province and a minimum of 2. (The suggestion that the maximum representation in any one Province be increased to 6 so as to reflect more correctly the density of the medical population in the various provinces, was not accepted by the Council.)

If the Minister implements the Council's recommendation it will, for the time being, help to reduce the growing disproportion between elected and nominated members, since each medical and dental school is automatically represented on the Council. Indeed, the increase of medical and dental schools throughout the country suggests that it is time to reconsider the basis on which these schools should be represented on the Council.

MEGIMIDE AND DAPTAZOLE

MEGIMIDE IN THIOPENTONE ANAESTHESIA AND BARBITURATE POISONING

Organic chemistry continues to make unique contributions which have an intimate bearing on everyday procedures in the practice of medicine. The latest additions to the practitioner's armamentarium include 2 new com-

betref. Die Minister het die aangeleentheid na die Kommissaris vir die Skadeloosstelling van Werkliede verwys wat dit op sy beurt, heeltemal ten regte, weer aan die Geneeskundige Raad voorgelê het.

Die Raad het die Kommissaris vir die Skadeloosstelling van Werkliede meegedeel dat:

'die Raad die leerstelling van wetenskaplike geneeskunde aanvaar, waar alle teorieë oor die oorsake en die behandeling van siektes gedurig aan kritiese wetenskaplike ontleding en navorsing onderwerp word. Die Raad aanvaar nie die konsep waarop chiropraktisyns hul diagnose en behandeling baseer nie; hul teorieë oor die etiologie van siekte is bewysbaar vals, en geheel en al in stryd met die opvattings van die wetenskaplike geneeskunde. Aangesien die Raad 'n openbare plig het om te vervul, en raad oor die beste vorm van die mediese praktyk aan die parlement moet gee, sal hy enige erkenning van hierdie groep kragtens die voorgestelde wetgewing, of enige ander wetgewing, as 'n stap agteruit beskou. Die statutêre erkenning van chiropraktisyns sal deur die algemene publiek—ten regte of ten onregte—beskou word as 'n soort parlementêre waarborg van die geldigheid van die beginsels waarop hierdie sekte opgebou is. Dit geld vir erkenning nie alleen kragtens die Wet op die Skadeloosstelling van Werkliede nie, maar ook vir erkenning kragtens enige ander wetsontwerp.

'Die Raad beskou hierdie mense nie as persone wat die dienste van mediese praktisyns of die groepe erkende adjunkte aanvul nie. Hulle verdring hulle, of probeer om hulle te verdring. Uit 'n logiese standpunt kan geen gegronde redes derhalwe aangevoer word vir hul erkenning kragtens die Wet op die Skadeloosstelling van Werkliede nie.'

VERTEENWOORDIGING IN DIE GENEESKUNDIGE RAAD

Daar is besluit om by die Minister aan te beveel dat, indien hy die Wet wysig om die verteenwoordiging van gekose mediese praktisyns in die Raad met 4 te vermeerder (soos reeds by 'n vorige geleentheid deur die Raad aan die hand gedoen), die verteenwoordigers op so 'n manier ingedeel moet word dat daar 'n maksimum van 5 gekose lede en 'n minimum van 2 vir enige besondere provinsie is.

(Die suggestie dat die maksimum-verteenwoordiging in enige besondere provinsie tot 6 vermeerder moet word om die digtheid van die mediese bevolking in daardie provinsie juister te weerspieël, is nie deur die Raad aanvaar nie).

As die Minister uitvoering aan hierdie aanbeveling gee, sal dit voorlopig help om die wanverhouding tussen gekose en benoemde lede te verminder aangesien iedere mediese en tandheelkundige skool outomaties in die Raad verteenwoordig word. Trouens, die toename van mediese en tandheelkundige skole dwarsdeur die land het die vraag laat ontstaan of die tyd nie aangebreek het om die grondslag waarop hierdie skole in die Raad verteenwoordig word, in heroorweging te neem nie.

MEGIMIDE EN DAPTAZOLE

MEGIMIDE BY TIOPENTOON-ANESTESIE EN BARBITURAAT-VERGIFTIGING

Organiese skeikunde gaan voort om unieke bydraes te lewer wat 'n intieme effek op alledaagse prosedures in die mediese praktyk het. Die jongste toevoegsel tot die geneesheer se wapenrusting sluit 2 nuwe samestellings in, nl.

pounds, viz. bemegride (Megimide) and amiphenazole (Daptazole).

A report on the use of Megimide in the termination of barbiturate anaesthesia has recently appeared in this Journal.[1] Megimide can, however, be put to considerable additional uses because of its pharmacological action as a specific antidote to the barbiturates. Chemically, Megimide definitely resembles the structure of the barbiturate ring. Its mode of action is reminiscent of the way in which para-aminobenzoic acid interferes with the action of the sulphonamides. Another interesting property is that its action, within certain limits, seems to be related quantitatively to that of the barbiturates, although the amount of barbiturate to be inhibited may be considerable.* This property has made possible the use of Megimide on an extensive scale in veterinary practice as well.

Apart from its life-saving value in the treatment of barbiturate poisoning (which will be discussed more fully in the sequel), Megimide has an important place in the lightening of barbiturate anaesthesia to restore breathing when an emergency of this type arises during surgery. It may also find an elegant use in obstetric practice, e.g. for caesarean section, because this drug makes induction with thiopentone safe, since its effects may be neutralized before the thiopentone can cross the placental barrier. The foetus will then not be affected by the barbiturate when this combination of drugs is used.

Bingle and Whitwam[2] have administered Megimide in repeated doses of 100 mg. without toxic or side effects. In any event, should the unlikely contingency of Megimide overdosage arise, the situation can be controlled simply and quickly by the use of a rapidly acting barbiturate. On the available published data, there is no contra-indication to the use of Megimide.

DAPTAZOLE IN BARBITURATE POISONING AND ITS USE WITH MORPHINE

Daptazole is a drug which, in some ways, can be regarded as a therapeutic twin to Megimide since, in certain circumstances, the two have a complementary function. One of the

*(The barbiturate-intoxicated patient regains consciousness despite a high blood barbiturate concentration. *Vide*: Holten, C. (1956): Ugeskr. Laeg. **118**, 72; Editorial (1956): Lancet, **1**, 293.)

1. Bentel, H., Barlow, M. B. and Ginsberg, H. (1956): This Journal, **2**, 198.
2. Bingle, J. P. and Whitwam, J. G. (1955): Brit. Med. J., **1**, 1340.

bemegried (Megimide) en amifenasol (Daptazole).

'n Verslag oor die gebruik van Megimide vir die beëindiging van barbituraat-anestesie het onlangs in hierdie Tydskrif verskyn.[1] Megimide kan egter ook vir baie ander doeleindes aangewend word weens sy farmakologiese uitwerking as 'n spesifieke teenmiddel vir die barbiturate. Chemies lyk Megimide nogal treffend op die struktuur van die barbituraat-kring. Die manier waarop dit werk, herinner 'n mens aan die manier waarop para-aminebensoësuur die werking van die sulfonamiede belemmer. Nog 'n interessante eienskap is dat die effek daarvan binne sekere perke skynbaar kwantitatief verwant is aan die effek van die barbiturate, hoewel die hoeveelheid barbiturate wat teëgewerk moet word aansienlik kan wees.* Hierdie eienskap het dit moontlik gemaak om Megimide op 'n uitgebreide skaal ook in die veeartsenykundige praktyk te gebruik.

Afgesien van sy vermoë om die lewe te red van persone wat aan barbituraatvergiftiging ly (wat later bespreek sal word), speel Megimide ook 'n belangrike rol in die verligting van barbituraat-anestesie om die asemhaling te herstel wanneer 'n noodgeval van hierdie aard tydens chirurgie voorkom. Dit is ook moontlik dat elegante gebruik daarvan in die verloskundige praktyk gemaak kan word, bv. vir keisersneë, omdat hierdie middel induksie met tiopentoon veilig maak, aangesien dit geneutraliseer kan word voordat die tiopentoon die placenta-versperring oorsteek. Die fetus word dan nie deur die barbituraat geaffekteer as hierdie samestelling van middels gebruik word nie.

Bingle en Whitwam[2] het herhaalde dosisse van 100 mg. Megimide toegedien sonder enige toksiese of bykomstige effek. In elk geval, as die onwaarskynlike gebeur en 'n te groot dosis Megimide word toegedien, kan die toestand op 'n eenvoudige en vinnige manier gekontroleer word deur die gebruik van 'n vinnig werkende barbituraat. Volgens die beskikbare, gepubliseerde gegewens is daar geen kontra-indikasie vir die gebruik van Megimide nie.

*(Die barbituraat-bedwelmde pasiënt herwin sy bewussyn ondanks 'n hoë barbituraat-konsentrasie in die bloed. *Vide*: Holten, C. (1956): Ugeskr. Laeg., **118**, 72; *Redaksioneel* (1956): Lancet, **1**, 293.)

1. Bentel, H., Barlow, M. B. en Ginsberg, H. (1956): Hierdie Tydskrif, **2**, 198.
2. Bingle, J. P. en Whitwam, J. G. (1955): Brit. Med. J., **1**, 1340.

principal actions of Daptazole is to increase the depth (but not the rate) of shallow breathing in many cases.** It is a completely non-specific action, possibly through some effect on the chemistry of the transmission of nerve impulses at the synapse or the myo-neural junction. It enjoys a special use in counteracting most of the side effects of morphine and of drugs which, although they do not chemically resemble morphine or Omnopon have a morphine-like action, e.g. pethidine, Physeptone, etc. This quality is likely to revolutionize all concepts of morphine therapy.[3]

Daptazole is, on the available evidence, completely harmless.[3, 4] As it prevents respiratory depression, it now becomes possible to step up the dose of morphine to what the patient's condition requires, without being severely limited by what the patient can safely take. This is important in the alleviation of the intractable pain of terminal carcinoma. McKeogh and Shaw [3] have obtained complete relief in such cases for 6-8 hours at a time by the use of morphine in doses up to 3 grains, when this was covered with Daptazole. The mixture was given 3-4 times a day for periods up to 8 months.

This inhibition of respiratory depression is important in the treatment of barbiturate poisoning. Megimide can be used as the specific antidote to the barbiturate. Its dosage is based neither on time nor on the quantity of the drug given, but only on the clinical state of the patient, who should be treated with Megimide until a safe stage is reached, i.e. return of the pharyngeal and laryngeal reflexes. Megimide should not be persisted in until the patient fully recovers consciousness. It is in these circumstances that Daptazole has an important ancillary role, as it assists respiration. The usual resuscitative measure should not, of course, be dispensed with.

Daptazole has apparently a central nervous stimulant action of the caffeine type. The drug produces mental alertness apart from its anti-narcotic effect. Consequently, patients treated with the combination of morphine and

DAPTAZOLE BY BARBITURAATVERGIFTIGING, EN DIE GEBRUIK DAARVAN MET MORFIEN

Daptazole is 'n middel wat, in sommige opsigte, miskien as die terapeutiese tweeling van Megimide beskou kan word want, in sekere omstandighede, het die twee 'n aanvullende effek. Een van die vernaamste funksies van Daptazole is om die diepte (maar nie die tempo nie) van vlak asemhaling te vermeerder.** Dit kan 'n heeltemal nie-spesifieke aksie wees, moontlik deur die een of ander effek op die skeikunde van die transmissie van senuwee-impulse by die sinapse of die spiersenu-aansluiting. Dit kan vir 'n spesiale doel gebruik word, naamlik as 'n teënmiddel vir die meeste van die bykomstige effekte van morfien en van verdowingsmiddels wat, hoewel hulle chemies nie na morfien of Omnopon lyk nie, tog 'n morfienagtige uitwerking het, bv. petidien, Physeptone, ens. Dit is waarskynlik dat hierdie hoedanigheid 'n algehele verandering teweeg sal bring in die opvattinge betreffende morfienterapie.[3]

Aan die hand van die beskikbare getuienis kan daar beweer word dat Daptazole volkome onskadelik is.[3, 4] Aangesien dit asemhalingsdaling voorkom, is dit tans moontlik om die dosis morfien te vermeerder tot die hoeveelheid wat deur die besondere toestand van die pasiënt vereis word, sonder om te veel beperk te word deur die hoeveelheid wat die pasiënt met veiligheid kan neem. Dit is van belang by die verligting van die hardnekkige pyn voortspruitende uit eindstandige karsinoom. In sulke gevalle het McKeogh en Shaw [3] volkome verligting vir tydperke van 6 tot 8 uur op 'n keer verkry deur die gebruik van soveel soos 3 grein morfien wat saam met Daptazole toegedien is. Die mengsel is 3-4 maal per dag togedien vir tydperke van soveel soos 8 maande.

Hierdie inhibisie van die asemhalingsdaling is van belang by die behandeling van barbituraatvergiftiging. Megimide kan gebruik word as 'n spesifieke teenmiddel vir die barbituraat. Die dosis is gebaseer nòg op tyd nòg op die hoeveelheid van die middel wat toegedien is, maar bloot op die kliniese toestand van die pasiënt wat met Megimide behandel behoort te word totdat 'n veilige stadium

** This stimulation of *depressed* respiration has been misunderstood, e.g. in an *Annotation* in the *British Medical Journal*, 21 January 1956, p. 161. Shaw clarified this point in the same journal (of 3 March 1956, p. 516) and also effectively disposed of other points of criticism made in that *Annotation*.

3. McKeogh, J. and Shaw, F. H. (1956): Brit. Med. J., **1**, 142.
4. Shaw, F. H. and Shulman, A. (1955): Brit. Med. J., **1**, 1367.

**Hierdie stimulasie van *gedaalde* asemhaling is verkeerd begryp, bv. in 'n annotasie in die *British Medical Journal*, 21 Januarie 1956, bl. 161. Shaw verduidelik hierdie punt in dieselfde tydskrif (3 Maart 1956, bl. 516) en weerlê ook op 'n doeltreffende wyse die ander kritiek in daardie annotasie.

3. McKeogh, J. en Shaw, F. H. (1956): Brit. Med. J. **1**, 142.
4. Shaw, F. H. en Shulman, A. (1955): Brit. Med. J., **1**, 1367.

Daptazole are alert and 'have a bright mental outlook under otherwise hopeless conditions'.[3]

From the practical point of view this is extremely important, especially to relatives of those brought by malignant disease to a hopeless, painful end. Daptazole may also be not without importance in preserving the testamentary capacity of those stricken in this way.

The action of the drug is so potent that it has been found necessary, in treating intractable pain due to malignant disease, to decrease the dose of Daptazole to permit sleep during the night. *Per contra,* it is equally easy to increase the dose during the day to keep the patient mentally alert, without interfering with the analgesic action of morphine and morphine-like drugs.

Daptazole may alleviate nausea, vomiting and constipation due to morphine. It prevents morphine depression of the cough reflex and probably prevents the development of tolerance to morphine.[3, 4] This raises the important question whether Daptazole will play a role in the treatment of morphine addiction—a matter which requires investigation. If it prevents tolerance, it may simplify the management of the victim of addiction and be important prophylactically in preventing this tragedy in chronic cases requiring drugs of the morphine type. Indeed, as Daptazole is inexpensive, serious consideration will have to be given to the routine use of this agent whenever a narcotic is prescribed.

The role of Daptazole is under investigation in several other fields.

It may make possible the safe use of morphine in obstetric analgesia, as it should prevent narcosis and respiratory depression of both the mother and the foetus. It may also play a role in the management of neo-natal asphyxia.[5]

It may be useful in electroconvulsive treatment to prevent the apnoea which often accompanies this form of therapy, especially when succinylcholine is used.

It may be useful in surgical procedures where heavy premedication has been employed. Megimide will terminate the barbiturate anaesthesia and Daptazole will neutralize the narcotic effects of the premedication.

Morphine cannot always be pushed rapidly to the desirable limit in the management of coronary thrombosis and it has always been used with considerable hesitation in the treatment of intractable asthma. Daptazole might

5. Shaw, F. H. (1956): Personal communication.

bereik is, d.w.s. die terugkeer van die keel- en strottehoofsreflekse; m.a.w. daar moet nie met Megimide volgehou word totdat die pasiënt volkome by sy bewussyn is nie. Dit is in sulke omstandighede dat Daptazole 'n belangrike aanvullende rol speel, want dit verleen uiters waardevolle hulp aan die asemhaling. Van die gewone maatreëls om die bewussyn te herstel, moet daar natuurlik nie afgesien word nie.

Daptazole het blykbaar 'n uitwerking van die kaffeïen-tipe op die sentrale senuweestelsel. Afgesien van sy anti-narkotiese effek, bring die middel ook geesteswakkerheid teweeg. Gevolglik is pasiënte wat met 'n samestelling van morfien en Daptazole behandel word, wakker en ‚het 'n optimistiese uitkyk in wat andersins 'n hopelose posisie sou gewees het.'[3]

Uit 'n praktiese standpunt is dit van die allergrootste belang, veral vir die familiebetrekkinge van diegene wat deur 'n kwaadaardige siekte tot 'n hopelose, pynlike dood gedoem is. Daptazole kan bes moontlik ook van belang wees vir die instandhouding van die testamentêre bevoegdheid van diegene wat op hierdie manier geteister word.

Die middel het so 'n kragtige uitwerking dat, by die behandeling van hewige pyn voortspruitende uit 'n kwaadaardige siekte, dit nodig bevind is om die dosis Daptazole te verminder sodat die pasiënt snags kan slaap. *Per contra* is dit ewe maklik om die dosis gedurende die dag te vermeerder om die pasiënt verstandelik wakker te hou sonder om die pynstillende effek van die morfien of morfien-agtige middels in enige opsig te belemmer.

Daptazole voorkom die mislikheid, braking en hardlywigheid wat deur morfien veroorsaak word. Dit voorkom die morfien-vermindering van die hoesrefleks en verhinder bes moontlik die ontwikkeling van verdraagsaamheid vir sover dit morfien betref.[3, 4] Dit bring 'n belangrike vraag te berde, naamlik of Daptazole 'n rol kan speel by die behandeling van verslaafdheid aan morfien. Dit is 'n saak wat beslis ondersoek behoort te word. As dit verdraagsaamheid voorkom, kan dit bes moontlik die behandeling van 'n slagoffer wat aan morfien verslaaf is, vereenvoudig, en ook uit 'n profilaktiese oogpunt van belang wees by die voorkoming van hierdie tragedie in kroniese gevalle waar verdowingsmiddels van die morfien-tipe gebruik moet word. Trouens, aangesien Daptazole goedkoop is, sal ernstige oorweging verleen moet word aan die roetine-gebruik van hierdie middel wanneer ook al 'n bedwelmingsmiddel voorgeskryf word.

Op etlike ander gebiede word daar ook ondersoek ingestel na die rol wat Daptazole kan speel.

Dit kan die veilige gebruik van morfien in verloskundige analgesie moontlik maak, want dit behoort narkose en asemhalingsdaling by sowel die moeder as die fetus te voorkom. Bes moontlik sal dit ook 'n rol in die bestuur van neo-geboortelike asfiksie[5] kan speel.

Dit kan ook nuttig wees by die elektro-konvulsiebehandeling vir die voorkoming van die apnee wat so dikwels hierdie vorm van terapie vergesel, veral wanneer suksinielcholien gebruik word.

Bes moontlik kan dit ook nuttig wees in chirurgiese prosedures waar daar heelwat premedikasie was. Megimide sal barbituuraat-anestesie beëindig, en Daptazole sal die narkotiese effek van die premedikasie neutraliseer.

By die beheer van koronêre trombose is dit nie altyd moontlik om die morfien vinnig tot die

5. Shaw, F. H. (1956): Persoonlike mededeling.

make the freer use of morphine possible with safety in both these grave conditions.

There are, of course, other antidotes to morphine. Nalorphine is a specific morphine antidote and in practice its use, because of its specificity, has been confined to cases of gross overdosage where the patient's life is at risk. Nalorphine, however, undoes *all* the effects of morphine, including its analgesic property. Daptazole, on the other hand, spares the analgesic effects of these narcotics and may therefore be of special therapeutic importance.

Under the umbrella of these 2 drugs, there will clearly be a powerful impact on the day-to-day practice of medicine in almost all of its aspects. Further reports confirming the actions already claimed, and indicating still other uses, will be awaited with considerable interest.

gewenste peil op te stoot nie, en dit is nog altyd met heelwat aarseling by die behandeling van hardnekkige asma gebruik. Daptazole sal dit miskien moontlik maak om morfien meer vryelik en met veiligheid te gebruik in albei hierdie ernstige toestande.

Daar is natuurlik ook ander teëmiddels vir morfien. Nalorfien is 'n spesifieke morfienteëmiddel, maar, met die oog op sy spesiwiteit, het die gebruik daarvan in die praktyk beperk gebly tot gevalle waar 'n buitensporige oordosis geneem is en die pasiënt in lewensgevaar verkeer. Nalorfien maak *al* die werk van morfien insluitende sy pynstillende effek, ongedaan. Daptazole, aan die ander kant, belemmer nie die pynstillende effek van hierdie verdowingsmiddels nie, en kan derhalwe van spesiale terapeutiese belang wees.

Hierdie twee middels is ongetwyfeld voorbestem om 'n groot invloed op byna alle aspekte van die alledaagse mediese praktyk te hê. Verdere verslae ter bekragtiging van die effekte waarop daar reeds aanspraak gemaak word, en verslae wat verdere gebruike aandui, word met groot belangstelling afgewag.

THE SCOPE OF RADIATION THERAPY

INCLUDING RADIO-ACTIVE ISOTOPES

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(*Continued from Vol.* 1, *No.* 5, *p.* 194)

RADIATION THERAPY

We have, in previous issues, described various techniques available for radiotherapy, e.g. X-rays, radium, radon, etc. and we have also pointed out that the basis of radiotherapy rests on the difference in sensitivity between neoplastic and normal tissues, different neoplasms having different degrees of radio-sensitivity and radio-curability. The value of radiation treatment in its widest sense, whether applied by X-rays, radium or other sources, will be considered under 3 headings:

(a) Radical treatment.
(b) Prophylactic treatment.
(c) Palliative treatment.

A. RADICAL TREATMENT

By this method it is hoped to deliver a sufficient dose to the tumour to cause its complete and, it is hoped, permanent disappearance, i.e. to attempt a cure in the same manner as the surgeon does when he sets out to do a radical operation for cancer.

The value of radical radiation therapy depends largely on the accessibility of the tumour. The best results are obtained in the accessible tumours, e.g. carcinoma of the tongue, mouth, lip, skin and larynx, and the development of the million and multi-million volt machines have been stimulated by the attempts to make all tumours accessible. We have, however, already seen that there are other factors beside accessibility which influence the result.

B. PROPHYLACTIC TREATMENT

Prophylactic treatment is supplementary to surgical measures and may be given pre- or post-operatively. The object of pre-operative radiation is to facilitate and make safer the subsequent surgical procedure. It is given, e.g. in a stage 2 carcinoma of the breast, with the object of diminishing the risk of implant-

ing carcinoma cells at the time of operation and to prevent their dissemination from manipulation of the breast during the operation. It is also claimed that mitosis will be slowed down, thus reducing the virulence of the carcinoma, as cells damaged by radiation will be less likely to survive when disseminated.[1]

Post-operative prophylactic treatment is called for when it is suspected that the disease has already spread beyond the field of the operation. In breast cases the mediastinum is treated when it is suspected that the internal mammary chain of glands may already be involved. It is given to the axilla in case all the glands have not been removed, and also to the supraclavicular regions. In the case of the breast it is never possible to be certain that the glands in the mediastinum, supraclavicular and axillary regions are not involved. X-ray therapy (pre- or post-operatively) is therefore always applied. Apart from breast cases, if the surgeon is uncertain whether he has removed a tumour completely (because of technical difficulties), he will prescribe post-operative radiotherapy, if he is dealing with a particularly virulent tumour; or if it is the type of tumour which results in early and rapid metastases, e.g. a medulloblastoma. In case of a medulloblastoma the surgeon requests that the whole spinal column and the cerebrum, as well as the cerebellum, be treated, because metastases tend to occur widely as well as early.

Further examples of prophylactic treatment include radiation of the glandular regions after removal of the primary tumour and even after subsequent block dissections. (There may still be involved glands, inaccessible to surgery.) The primary treatment of carcinoma of the testicle is surgical, but prophylactic irradiation to the inguinal and aortic glands is invariably given. A malignant melanoma of the skin is also treated first by surgery, but should be followed up with post-operative radiotherapy to the glands draining the particular region, even though block dissection of the glands may have been attempted.[2]

Prophylactic treatment to the mediastinum (after operation for bronchial carcinoma) is indicated as much as it is after removal of the breast, perhaps more so.

In the skeletal system, pre-operative treatment of the osteogenic sarcomata with vigorous doses to the tumour is advised and post-operative treatment is given to the glandular regions. In carcinoma of the cervix, following radium treatment or between the applications of radium, prophylactic X-ray treatment is given to the pelvis, to increase the radiation dose to the parametria and to destroy cancer cells in glands.

The operation for the removal of malignant ovaries (and particularly for a malignant cyst, the contents of which may have been spilt during the operation into the peritoneal cavity) should always be followed by post-operative radiotherapy. Sampson Handley, Snr., many years ago at the Middlesex Hospital, London, advocated post-operative radiation to the region of the incision in every operation undertaken for malignant disease in the abdominal cavity.

Except for carcinomata of the alimentary tract (where post-operative prophylactic treatment is unlikely to have any effect because of the lack of radio-sensitivity of these tumours), we shall see that most operations for malignant disease call for prophylactic post-operative radiation. Even in the alimentary tract, when the operation is for a lymphosarcoma or similar tumour of the stomach or small intestine, prophylactic post-operative radiation is clearly indicated. There is thus a very wide field for radiation therapy in this category; more patients are treated with prophylactic radiation than with radical X-ray therapy.

C. PALLIATIVE TREATMENT

Palliative therapy is used in the following instances:

1. To relieve intractable pain, as in secondary deposits in bone. It is amazing how rapid the response may be, e.g., in secondary deposits in the skeleton from carcinoma of the breast.

2. To relieve pressure symptoms such as obstruction of the superior vena cava by cancer in the mediastinum or a right bronchial carcinoma or malignant secondaries from tumours elsewhere, as in the breast. Striking relief may be obtained in these cases.

3. To reduce the actual size of the tumours, e.g. a large inoperable mass in a breast, to prevent fungation or to promote healing in cancers which have already broken down, e.g. in carcinoma of the breast.

The treatment of secondary deposits in the brain from carcinoma elsewhere, and of secondary deposits in the lungs (in certain circumstances) may give striking results. One of us (M. W.[4]) has reported a case of a child aged 10 whose lungs were riddled with secondary deposits from carcinoma of the thyroid in 1937. Following deep X-ray therapy the lungs cleared up completely and

the patient is still perfectly well now, some 18 years later.

The value of palliative treatment, however, is perhaps best demonstrated and realized in the unfortunate woman with numerous secondary deposits from cancer of the breast involving the skeleton and the skull.[5] She may even have an incurable primary tumour, which is still present because, through fear or other reasons, she may not have sought advice when the tumour was first discovered some years before.

Many a patient of this type has been kept alive in comfort for up to 7 years, in our own experience. She can resume her normal occupation and duties, with judicious X-ray therapy combined with hormonal treatment (either androgens or oestrogens, whichever may be indicated according to the age of the patient and the position of the secondary deposits.) More recently, palliative surgery has been undertaken in this type of case with bilateral adrenalectomy or hypophysectomy. The scope of this type of palliative surgery is very much restricted, compared with the vast field for palliative radiation.

The object of palliative treatment is thus to prolong the patient's life in reasonable comfort and to return him, for a period, to a useful existence even though the condition is incurable and a fatal issue is inevitable.

If we consider the various systems individually, we shall get some indication of the value of radical, prophylactic and palliative treatment.

THE CENTRAL NERVOUS SYSTEM

With a few exceptions, the treatment of tumours of the brain and spinal cord is primarily a surgical problem. McWhirter[6, 7] regards the following as radio-resistant neoplasms:

1. Astrocytomata.
2. Malignant gliomata.
3. Ependymomata.
4. Oligodendrogliomata.
5. Meningiomata.
6. Neurilemmomata.
7. Teratomata.
8. Chordomata of the brain and spine.
9. Melanomata.

We shall discuss pituitary tumours under the *Endocrine System*.

He regards the radio-sensitive neoplasms requiring only localized treatment as:

1. Poorly differentiated oligodendrogliomata.
2. Infra-pituitary, undifferentiated carcinomata.
3. Glomus jugulare tumours.
4. Neoplastic angiomata.

There are radio-sensitive tumours which metastasize so rapidly and readily throughout the central nervous system that these require treatment directed to the whole central nervous system. The medulloblastoma is the best example. This tumour of the cerebellum is remarkably radio-sensitive, but recurrences take place extensively and rapidly. Even though the whole brain and spinal column is generally treated, the 5-year survival results are not good. Because of the extreme tendency to metastasize, these tumours are more a radio-therapeutic than a surgical problem.

There is some difference of opinion, in the various series which have been published, concerning the survival rates. McWhirter[7] regards the prognosis as only about 9 months, whereas Richmond[8] gives a 43% 5-year survival rate and Edith Paterson[9] a 5-year survival of 42%. In our own cases we have not been so fortunate and those we have treated, although the immediate response was very good, died within a short period from recurrences. Other tumours, e.g. malignant pinealomata and choroid plexus papillomata, may be highly radio-sensitive, but are prone to early and extensive metastases.

The infra-pituitary group of tumours described by McWhirter is radio-sensitive, and as these spread widely along the base of the skull, they are generally not amenable to surgery and have to be treated with radiotherapy.

Of the benign conditions, the craniopharyngiomata are a surgical problem, but frequently cannot be removed completely and evacuation of the cyst at intervals is all that can be done. In collaboration with Mr. H. Mendelow and Mr. E. M. Kerr of Mr. K. L. Allen's Neuro-Surgical Unit, we have injected radio-active gold in a case of Rathke's pouch cyst. We were influenced by the excellent results sometimes obtained with radio-active gold in pleural and peritoneal effusions. The problem is, of course, not identical, because the good results in the pleural and peritoneal effusions have been obtained in malignant conditions, whereas the cranio-pharyngioma is a benign lesion. It was hoped, however, that the radiation might stop the secretion in the cyst. We have not done sufficient cases to express an opinion on this method. We have had to be very cautious and have had to start with very small quantities of radio-active gold. The amount of radiation delivered to the cyst walls by a given quantity of radio-active gold is no easy matter to determine, even though calcification in the walls of the cyst may enable one at times to estimate the volume from the

X-ray films. It is, however, worth continuing with these investigations as the treatment of these conditions is otherwise unsatisfactory.

We have heard that one of the patients (an infant with a Rathke's pouch cyst) has gone on for almost 2 years after radio-active gold treatment, without having the pouch evacuated, whereas formerly the cyst had to be emptied after an interval of several weeks. There were no side reactions after the injection.

It will be seen then that, as a radical form of treatment, radiotherapy plays a very small part in the central nervous system, excluding the pituitary tumours, particularly as in almost every case some form of surgery is undertaken, either to relieve pressure or to attempt the removal of the tumour or to establish the diagnosis.

Prophylactic Treatment of the Central Nervous System. When an invasive tumour is found which cannot be completely removed by the surgeon, surgery has to be followed by prophylactic radiotherapy. A point of interest here is that, in recent years, a method has been evolved for determining at operation whether the whole tumour has been removed or not. This is done with the special Selverstone geiger probe, after the administration of radio-active phosphorus intravenously. This method is of use, not only at the operation to determine whether all the tumour has been removed, but also before the operation, to outline the extent and position of the tumour. Moreover, it also serves as a confirmatory diagnostic procedure. We have carried out a number of these investigations with Mr. E. M. Kerr and Mr. H. Mendelow of Mr. K. L. Allen's Neuro-Surgical Unit, pre-operatively as a diagnostic measure, and to localize the tumour. The probe is inserted through the burr holes, which are generally already present as the result of ventriculography. It is amazing how accurate the method may be, and it is of the greatest help in indicating the best position for biopsy. At times we have found that even minute portions of the tumour removed through the biopsy needle gave a high count with the Selverstone probe. Where then the surgeon has not been able to remove all the tumour or where he is in doubt whether the whole tumour has been removed, X-ray therapy is indicated. There are no reliable figures of the number of cases treated with surgery and prophylactic X-ray therapy for comparison with those treated by surgery alone. A research programme was started about 2 years ago at the Royal Marsden Hospital, London (formerly the Royal Cancer Hospital) in an attempt to investigate this problem, but no figures have yet been published, as far as we are aware, and it will be some time before one can expect reliable statistics. Nevertheless, it has already been seen that prophylactic X-ray treatment plays a bigger part in the central nervous system than does radical X-ray therapy, because even the radio-sensitive tumours are relatively infrequent compared with the more frequent radio-resistant tumours, e.g. the meningiomata and the gliomata.

SPINAL TUMOURS

With the exception of spinal tumours of the Hodgkin's, lymphoma and lymphosarcoma type (in which radical X-ray therapy may be undertaken, possibly following a decompression laminectomy if pressure symptoms are present) radical treatment is again in the field of the surgeon.

It is doubtful whether treatment for such tumours as those of the Hodgkin's and lymphoma type, involving the spinal canal, should be considered as radical treatment. It comes more accurately under the term 'Palliative', as these tumours are generally metastatic in origin. Nevertheless, they have been included under the 'Radical' heading, because the treatment of the tumours, if they are still localized to the spinal column, if they are extensions from neighbouring vertebrae or if they are situated in the spinal cord itself, requires full dosage to be given. Patients may survive many years after such treatment to the spine.

The treatment of spinal cord metastases from medulloblastomata and from tumours of the choroid plexus is also classified as prophylactic, since it is carried out whether there are clinical manifestations of secondary deposits or not.

There has been considerable discussion whether radiotherapy may cause necrosis of brain tissue. Whereas formerly, following the experiments of Finzi, Lazarus-Barlow and others[3] it was considered that brain tissue was very resistant to radiation, more recently it has been recognized that too high a dosage may cause necrosis. The difficulty then arises, as in many other malignant conditions after radical X-ray treatment when symptoms recur later, to be certain whether one is dealing with a recurrence or a necrosis. Another difficulty in treating brain tissues is the risk of causing oedema of the brain and increased intra-cranial pressure. For this reason it has been our practice to start with very small X-ray doses to the brain, and build up the

dose we intend to give per day, over a period of 7-10 days. This technique is advised by Edith Paterson.[9] In this way, if oedema does arise and become clinically manifest, it will not be very marked and it will be possible to reduce the dose or stop the treatment for the time being. Necrosis of the spinal cord may more easily take place in the cervical region (where it is so much more accessible). This has to be borne in mind when treating neoplasms in the neighbourhood of the cervical spine. Great precaution has to be taken to keep the spinal canal as far as possible out of the X-ray beam; when treating tumours of the spinal cord itself, the dosage has to be administered cautiously.

In some of the examples given there can be no sharp distinction between prophylactic and palliative treatment. When a surgeon has failed, for technical reasons, to remove a tumour completely, the treatment under these conditions may be regarded as prophylactic. The tumours are generally radio-resistant and the most that one can then hope for is to delay the spread or growth of the tumour.

Secondary deposits in the brain must, however, be treated with palliative X-ray therapy. When a secondary deposit is easily localized, the surgeons may feel justified in attempting to remove it. One cannot be certain, however, that other secondary deposits are not present in the brain or that they will not become manifest soon after the operation. Palliative radiation therapy plays a much greater part than surgery in the treatment of secondary deposits in the brain, from whatever primary source. Whether it is worth giving radiation therapy naturally depends on the extent of dissemination of the secondary deposits elsewhere in the body and on the general condition of the patient.

OPSOMMING

Radioterapie word in oënskou geneem onder die volgende hofies:

(a) Radikale behandeling;
(b) Profilaktiese behandeling;
(c) Palliatiewe behandeling.

Die toepassing van hierdie 3 soorte behandeling op gewasse van die sentrale senuweestelsel word omskryf.

In sommige gevalle kan daar 'n aansienlike verskil tussen profilaktiese en palliatiewe behandeling wees.

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THE 'DUMPING' OR POST-GASTRECTOMY SYNDROME

REPORT OF A CASE

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The 'dumping' or post-gastrectomy syndrome consists of a variety of symptoms which may be mild or severe. The symptoms experienced by these patients include nausea, weakness, frequent vomiting—the vomitus often containing bile—and abdominal discomfort. Vasomotor symptoms comprise a feeling of warmth, sweating, palpitations, vertigo, giddiness and even collapse.

A difference of opinion appears to exist about the relative frequency of this syndrome and its incidence following different gastrectomy techniques. Some writers believe that mild forms of the syndrome occur in most cases. The severe forms are, however, only encountered occasionally, but may produce considerable distress and failure to gain weight.

Machella[1] summarizes the various mechanisms thought to be responsible for the syndrome and suggests that the symptoms are due to the marked distension of the jejunum. The abdominal discomfort and pain are probably

due to intestinal hyperactivity and spasm. The regurgitation of bile is thought to be part of an afferent loop syndrome.

The vasomotor component may be due to the very rapid absorption of carbohydrate and leads to attacks which bear a marked similarity to hypoglycaemia.[2] In these attacks, which may be the most prominent feature of the syndrome, the underlying abnormality is apparently due to the rapid absorption of glucose from the intestinal tract. These patients show a marked difference in their glucose tolerance when the glucose is administered orally and intravenously. In this communication such a striking difference in response is demonstrated in a patient suffering from a severe form of the 'dumping' syndrome.

The marked weakness complained of by patients with the 'dumping' syndrome has been shown to be related to low serum potassium levels. However, in the present case serum potassium estimations done in the fasting state, during the hypoglycaemic phase 2½ hours after the orally ingested glucose, and at 1½ hours after the intravenous glucose, were 4.8, 5.2, and 5.1 meq/L, respectively. All these findings are well within normal limits.

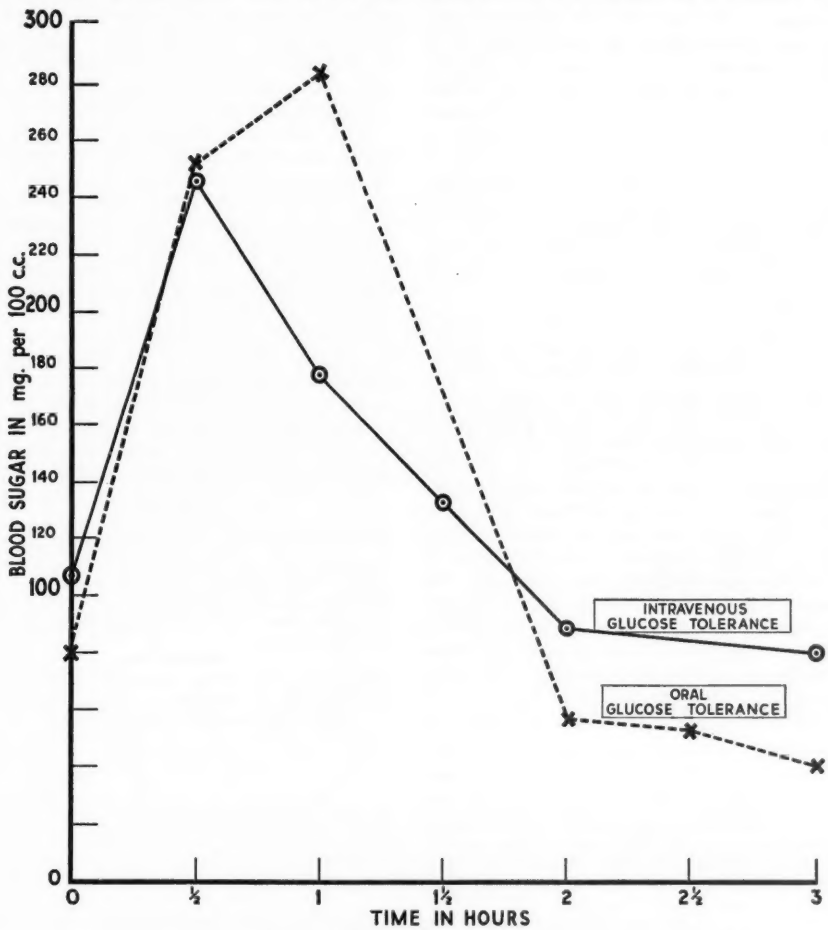

Fig. 1. Glucose tolerance curves.

CLINICAL NOTES

The patient was a male aged 53 years who complained of 'fainting attacks' which

appeared 6 months after gastrectomy for a duodenal ulcer. The attacks occurred from 20 minutes to 3 hours after a meal. He did not have attacks before breakfast or later than 10 p.m. The attack was described as 'a feeling of suffocation associated with marked weakness'. He felt hot and cold, perspired profusely, had an ashen appearance and had to support himself to prevent collapse. Palpitations were prominent. However, actual unconsciousness did not occur. The attack passed over in 15—20 minutes, leaving a feeling of exhaustion. He had also noticed that he passed an excessive amount of pale urine during and after an attack. Complete physical examination of this patient revealed no obvious abnormalities, apart from signs of loss of weight. The blood pressure was 110/75 mm. Hg.

Response to Oral and Intravenous Glucose. Following the ingestion of 100 g. glucose (Fig. 1), the blood sugar rapidly increased from a normal fasting level to reach a peak of 284 mg. per 100 ml. at the end of the first hour, and slight glycosuria was present. During the second hour the blood sugar fell precipitously to 56 mg. per 100 ml. and remained at this low level during the third hour.

At this stage the patient showed typical hypoglycaemic symptoms. He complained of faintness and weakness, he was cold and clammy and he stated that his symptoms were very similar to his 'attacks'. On the following day the glucose was administered intravenously (0.5 g./Kg. body weight). The intravenous glucose tolerance was found to be within normal limits and did not show the drop to hypoglycaemic levels which occurred with the oral glucose tolerance test.

The marked difference in the oral and intravenous tolerance curves demonstrates conclusively that the abnormality in these cases lies in the rate of absorption of glucose from the intestinal tract. The rapid increase in the blood sugar to 'diabetic levels' is indicative of the rapid passage of the glucose solution into the small intestine followed by rapid absorption into the blood stream.

The subsequent hypoglycaemia is thought to be due to an excessive metabolic response to the markedly raised blood sugar level. The normal blood sugar curve after intravenous glucose demonstrates that the tremendous variations in blood sugar following the ingested glucose is not due to abnormalities in glucose storage or oxidation *per se.*

SUMMARY

A marked difference in the response to oral and intravenous glucose is demonstrated in a severe case of the 'dumping' syndrome.

This difference is considered to indicate that the abnormality in these cases lies in the rapid absorption from the intestinal tract.

OPSOMMING

'n Opvallende verskil in die reaksie op mondelinge en binne-aarse glukose in 'n ernstige geval van ‚dumping'-sindroom word in oënskou geneem.

Daar word gemeen dat hierdie verskil 'n aanduiding is dat die abnormaliteit in hierdie gevalle toegeskryf moet word aan vinnige absorpsie uit die ingewandskanaal.

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PRINCIPLES OF UNIPOLAR ELECTROCARDIOGRAPHY

AN INTRODUCTION

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IV. VENTRICULAR HYPERTROPHY

(*Concluded from p.* 217)

Ventricular hypertrophy results in an increased thickness and bulk of the ventricular wall and consequently leads facing the surface of the hypertrophied ventricle will show exaggerated patterns.

LEFT VENTRICULAR HYPERTROPHY

With left ventricular hypertrophy the heart is usually in a horizontal position. Leads V5 and V6 commonly face the left ventricle and leads V1 and V2 the right ventricle.

The R wave in the qR complex of a left ventricular surface lead and the S wave in the rS complex of a right ventricular surface lead are caused by and are reflections of left ventricular depolarization (Fig. 49). In the pre-

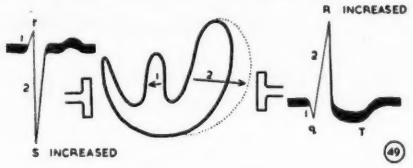

Fig. 49. Left ventricular hypertrophy.

sence of left ventricular hypertrophy these waves are exaggerated due to the increased electrical forces in the hypertrophied wall. Thus, left ventricular leads show high amplitude R waves and right ventricular leads deep S waves.

In addition, the S-T segment is depressed and the T wave inverted in left ventricular leads (Fig. 49). This may be a secondary phenomenon or possibly due to a relative ischaemia as a result of disproportion between the muscle mass and the available blood supply.

RIGHT VENTRICULAR HYPERTROPHY

Right ventricular hypertrophy usually results in an electrically vertical heart with clockwise rotation (Fig. 50).

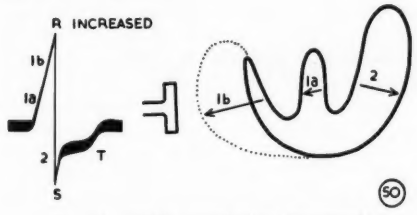

Fig. 50. Right ventricular hypertrophy.

Normally depolarization of the septum occurs first, followed by depolarization of both free walls of the ventricles (Figs. 4, 5). In normal circumstances the left free wall with its greater potential electrical force counteracts the weaker force of the right free wall (Fig. 6). When right ventricular hypertrophy occurs, the potential force of the right free wall is greatly increased and may even exceed that of the left free wall (Fig. 50). Thus the R wave in right ventricular leads, usually V1-V4, may represent both septal and right ventricular depolarization (Fig. 50, arrows 1a and 1b) consequently the R wave is of greater amplitude than normal.

S-T segment depression and T wave inversion may occur in right ventricular leads. This may be a secondary phenomenon or may be due to a relative ischaemia of the hypertrophied right ventricle.

An S wave may be conspicuous in left ventricular leads due to late depolarization of a remote region of the right ventricle (Fig. 51, arrow 3).

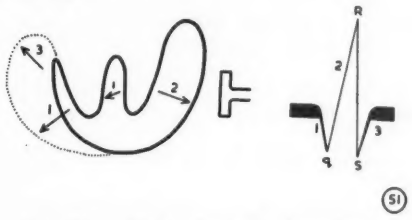

Fig. 51. Right ventricular hypertrophy.

A prominent R wave may appear in lead AVR (Fig. 52). This may be due to (a)

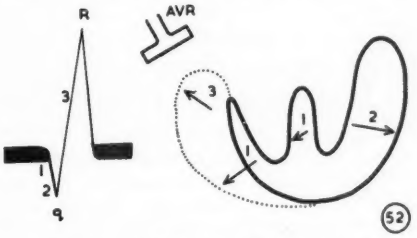

Fig. 52. Right ventricular hypertrophy.

marked clockwise rotation so that the left ventricle 'faces' lead AVR, or (b) the possibility that, in right ventricular hypertrophy, the right shoulder and hence lead AVR now faces a portion of the right ventricle and consequently faces the depolarization wave more directly (Fig. 52).

SUMMARY OF POSSIBLE ELECTROCARDIOGRAPHIC FINDINGS IN RIGHT VENTRICULAR HYPERTROPHY

1. Clockwise rotation with vertical heart position.
2. Conspicuous R waves in right ventricular leads.
3. S-T segment depression and T wave inversion in right ventricular leads.
4. Conspicuous S wave in left ventricular leads.
5. Conspicuous R wave in lead AVR.

V. DIGITALIS AND POTASSIUM EFFECT

DIGITALIS

Digitalis intoxication may cause almost any type of electrocardiographic abnormality, particularly the arrhythmias. It may alter the QRST complex in a characteristic manner, causing S-T segment depression and T wave inversion. The S-T segment depression is typically a gradual downward slope with a terminal rise to the isoelectric level (Fig. 53).

It may be likened to the mirror image of a correction mark.

In addition, there is shortening of the Q-T interval. These changes occur chiefly in leads facing the pathological or dominant ventricle. (Fig. 54).

POTASSIUM

With a progressive rise in the serum potassium level (hyperkalaemia) the following electrocardiographic sequence of events takes place (Fig. 55):

1. Tall peaked T waves.
2. Diminution in the amplitude of the R wave.
3. Absent P waves.
4. Widening of the QRS complex.
5. Blending of the QRS complex with the T wave, producing a diphasic curve.

With a progressive diminution in the serum potassium level (hypokalaemia) the following electrocardiographic sequence of events takes place (Fig. 55):

1. Flattening of the T wave with prolongation of the Q-T interval.
2. Depression of the S-T segment.
3. Prolongation of the P-R interval.

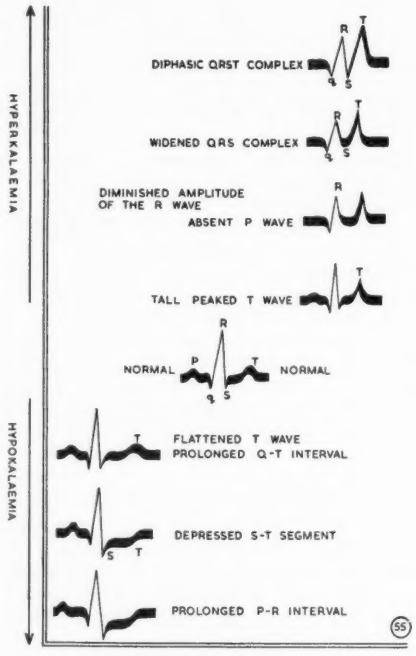

Fig. 55. Potassium effect.

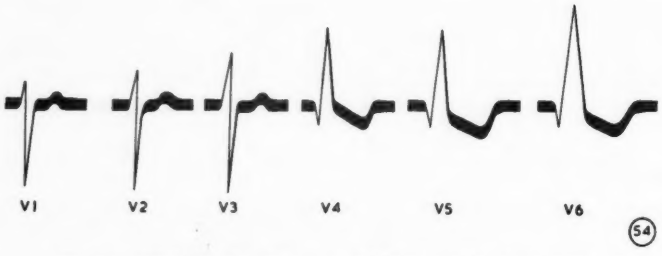

Fig. 54. Digitalis effect in a case of left ventricular dominance.

GENERAL OBSERVATIONS

1. Electrocardiographic abnormalities may occur in normal healthy persons and in the absence of organic heart disease.
2. Organic heart disease may occur with normal electrocardiographic patterns.

3. Serial electrocardiographic studies are of particular value, as a changing pattern is usually significant.

4. Inquiry should always be made whether the patient has been taking drugs. Digitalis is the arch-simulator and may mimic almost any electrocardiographic pattern.

5. Particular attention should be paid to the voltage and standardization, bearing in mind that low voltage occurs in such conditions as pericardial effusion and myxoedema.

6. The electrocardiogram is but a supplementary aid to diagnosis and must always be used by the clinician in conjunction with the clinical examination.

OPSOMMING

Die elektrokardiografiese patrone van ventrikulêre hipertrofie, en die effek van vingerhoedskruid en kalium, soos met eenpolige leidrade aangeteken, word verduidelik en geïllustreer.

ALCOHOLISM

PSYCHOPATHIC PERSONALITY AND PSYCHOPATHIC REACTION TYPE

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Considerable confusion exists about the relationship between psychopathy and alcoholism. This is evident both in the literature and in the tendency of many practitioners to equate absolutely psychopathic personality with alcoholism.

The thesis in this paper is founded on investigations made at Northlea Retreat and attempts to show that this confusion results from the existence of a hitherto unrecognized entity which, while closely resembling the psychopathic personality when the patient is subjected to certain stimuli, may be distinguished clearly from the latter.

Northlea is an establishment for the treatment of addiction to alcohol and drugs. Living at Northlea makes adjustive demands on the patients similar to those in a normal environment. The same standards of behaviour are expected. As in the open environment, integration into the group is all important. Many patients work in the open labour market and contact with relatives, friends and employers is free. It is imperative for the patient to be able to form healthy personal relationships with his fellows if he is to benefit from therapy. His alcoholic history is no bar to integration in the group and the factor responsible for his rejection by Society no longer hinders his normal adjustive abilities.

The past behaviour of a large number of the new admissions to the Retreat is responsible for an initial assessment of the cases as psychopathic personality, apparently confirming the diagnosis of the referring physician. Many of these cases, however, reveal an ability to adjust to particular social situations in the environment comprising patients and staff of the Retreat. The diagnosis 'psychopathic personality' thus becomes invalid.

The need hence arose for a diagnostic description which, while underlining the essentially psychopathic nature of the pre-admission behaviour, recognized the ability to adjust when certain stresses were no longer operative. The description 'psychopathic reaction type' was evolved to differentiate this group from the classical psychopathic deviate. By psychopathic reaction type we imply the existence of a *functional* emotional imbalance, operative in times of stress in an otherwise fairly well adjusted person. The psychopathic personality, on the other hand, has a *structural* impairment of his emotional apparatus, with consequent habitual inability to adjust.

PSYCHOPATHIC PERSONALITY

Because the diagnosis 'psychopathic personality' is generally so broad and nebulous,

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it is necessary to describe how we use the term. We have analyzed the personality traits of patients we consider to be psychopathic personality deviates. These traits have been drawn up from an analysis of responses given by these patients to a battery of psychological tests, together with a factorial analysis of the patient's past history.

Definition. A psychopath is one who, by reason of an imperfectly balanced emotionality, manifests from an early age an inability to make adequate adjustments to life situations. The following pathological reactions are evident:

1. Poor family relationships, both in the parent-child situation and with siblings;
2. Poor inter-personal relations in school, work and social spheres;
3. Impulsive behaviour, with little or no regard for the outcome of any such behaviour;
4. Egocentricity with complete disregard for the feelings and rights of others;
5. Complete lack of perseverance in any field;
6. Poor sexual adjustment; many short, stormy affairs, but no lasting attachment;
7. An inability to conform to the mores and customs of the society in which he lives;
8. A lack of natural ability to adjust to environmental situations leading to an attempt on the part of the psychopath to manipulate the environment to his immediate benefit without any regard for eventual consequences;
9. Inability to learn from experience with resultant repetitive, non-adjustive behaviour;
10. Demand for immediate gratification of desires.

Recently the following definition was accepted by the Appellate Division:[1]

'A psychopath is a type of person in whom there exists an emotional *immaturity* and instability which manifests itself from an early age as an inability to conform to the accepted moral and social standards demanded by the society in which he lives.'

Although in every other respect this is an apt and precise definition, we do not feel that immaturity in the emotional sphere is operative. There appears to be some other inherent pathology in emotional response. The nature of this pathology is a definite deviation of emotional expression which follows an all-or-none law. When aroused, there is a total short-lived emotional response with absolutely no modification by reason or any other function of intelligence. In other words, the normal close reciprocity between an idea and the concomitant emotional tone is completely lacking. The shortlived emotional response has no modifying effect whatsoever on any later behaviour in situations similar to the one which evoked that reaction.

PSYCHOPATHIC REACTION TYPE

This concept was evolved at Northlea Retreat to designate those patients who, on initial assessment manifested behaviour identical with that of a psychopathic personality but who later demonstrated an ability to adjust to the conventional demands of a particular social group. The mechanism underlying the development of this particular pseudo-psychopathic reaction appears to be the following:

The alcoholic causes problems in all aspects of his life—disharmony in the home, economic difficulties and general social maladaption. As he is the cause of this disorganization, an atmosphere of hostility towards him emerges. Invariably he reacts with aggression and total counter-rejection of the hostile society. He develops paranoidal ideas which, together with non-acceptance in his social sphere, cause a defence reaction, the most essential feature of which is repudiation of the social mores of his group. The behaviour resulting from this repudiation closely resembles the habitual reactions of the psychopathic personality.

The early history of these patients links the appearance of their psychopathic behaviour with the commencement of heavy drinking.

An interesting feature is the relative rapidity with which the psychopathic reaction type discards his anti-social responses once he enters a non-critical, accepting environment.

To validate our thesis and our clinical findings we made use of an objective psychological tool. The nature of the investigation necessitated a test giving a 'vertical' rather than a 'horizontal' cross-section of personality. This yielded a picture of the patient's reaction to his environmental situation when he was still reacting to a hostile environment. The test was repeated later when he had been accepted in a group and the immediate environment was relatively free of stressful situations. Thus we learned whether the initial psychopathic response was a reaction to the environmental situations operative at that time or whether it was his habitual mode of response to any situation. With the repetition of the test, a clear-cut differentiation betwen the psychopathic personality and the psychopathic reaction type became discernible.

The only suitable type of test was a personality inventory type, and the Minnesota Multiphasic Personality Inventory (MMPI) was chosen. Re-testing was performed after 45 days. This interval was considered sufficient for the patient to find his place in the non-critical accepting social group. In some

cases it was possible to re-test after a further period of 45 days.

METHOD OF INVESTIGATION

A. BRIEF DESCRIPTION OF THE TEST

The MMPI is described by Hathaway and McKinley[2] as 'a psychometric instrument designed ultimately to provide, in a single test, scores on all the more important phases of personality'.

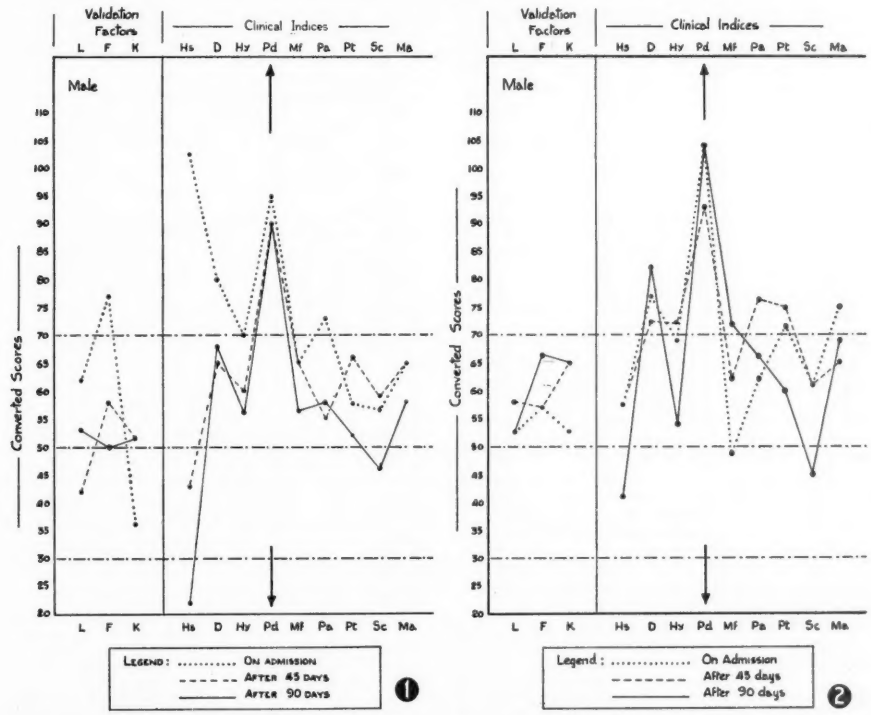
In the test 550 statements (each printed on a separate card) have reference to a wide range of subject matter, such as physical condition, social attitudes, etc. The subject is requested to sort the cards as 'True', 'False' and 'I cannot say'.

In constructing the test Hathaway and McKinley made a statistical analysis of the responses of 800 psychiatrically diagnosed subjects and of 700 visitors to the Minnesota University Hospital, who were presumed to be a cross section of the population. The 9 clinical scales derived from a comparison of the responses of the 2 groups were:

1. Hs—Hypochondriasis;
2. D—Depression;
3. Hy—Hysteria;
4. Pd—Psychopathic deviate;
5. Mf—Masculinity/femininity;
6. Pa—Paranoia;
7. Pt—Psychasthenia;
8. Sc—Schizophrenia;
9. Ma—Mania.

In addition, 4 validating scales were devised:

1. ?—The number sorted into the 'I cannot say' group;
2. L—The number of questions answered in the negative which are seldom truthfully so answered;
3. K—A correction factor which has no clinical significance in itself but indicates the degree of the subject's desire to make a good impression or not. Persons desiring 'good' scores will have elevated K scales, while those who desire 'poor' scores will have lowered ones;



Figs. 1 *and* 2 are the M.M.P.I. profiles of patients manifesting psychopathic tendencies both initially and on re-testing. Both these patients were re-tested on 2 occasions. In the 3 test situations the 'psychopathic deviate' (Pd factor), indicated by the arrow, remained at an abnormally high level. In other words, their psychopathic response was the habitual mode of reaction and was not modified by changes in the environment.
Both these cases were diagnosed clinically as psychopathic personality deviates.

4. F—A check on the validity of the entire test. A high F score indicates confusion, lack of understanding or deliberate simulation.

The normal range of scoring is considered to be between 30 and 70. Scores above 70 and below 30 are indicative of abnormality. When a particular score in the profile is high in relation to the other scores, even if not above 70, this may be of significance as an indication of abnormality.

The empirical validation of each scale frees the M.M.P.I. from dependency upon the accuracy of the subject's self-assessment.

B. ILLUSTRATIVE GRAPHS

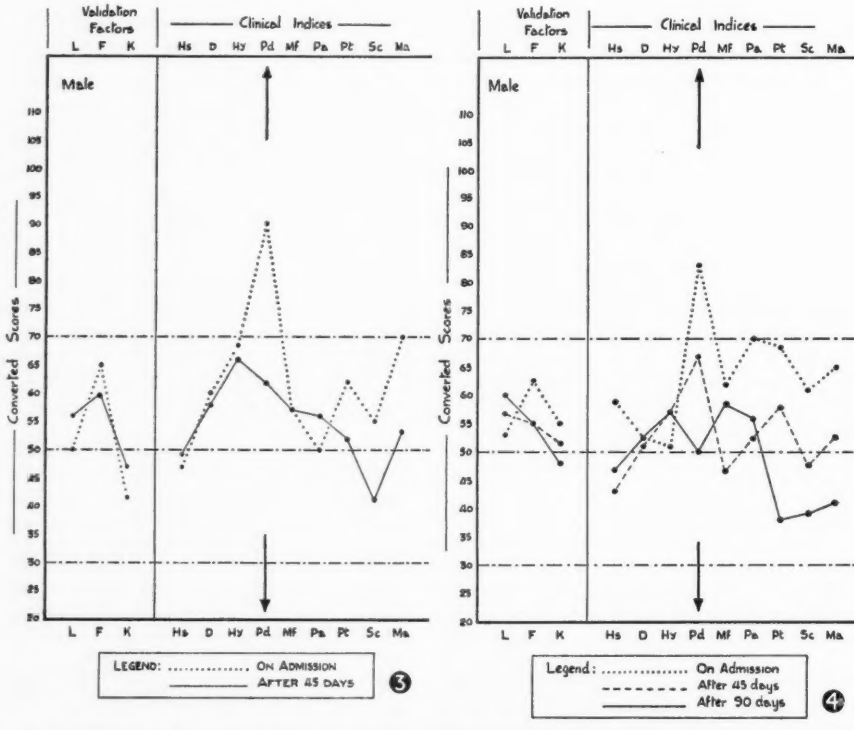
Illustrative graphs of the phenomenon discussed are shown in Figs 1-5.

C. ANALYSIS OF THE TEST RESULTS

Fifty-two non-selected consecutive admissions to Northlea were tested.

1. Of the sample of 52 cases, 36 showed an initial psychopathic response;
2. Of these 36, 11 showed a psychopathic response on retesting (Figs. 1, 2);
3. Twenty-five showed a definite return to normal and an absence of the psychopathic response on retesting (Figs. 3, 4);
4. Sixteen of the cases tested initially showed neurotic anomalies other than psychopathic response. A great proportion showed a definite diminution of these neurotic manifestations on retesting;
5. Of the 11 who on retesting again showed a psychopathic response, 9 fitted without a doubt into the clinical description of the psychopathic personality. Some doubt about the diagnosis existed in the remaining 2.

Some psychometric confirmation of the validity of the concept of psychopathic reaction type was provided by the fact that the only case falling into Group C (4) who could be retested after a relapse into alcoholism, and subsequent real or imagined reactivation of the rejecting environment, manifested a psychopathic response.



Figs. 3 *and* 4 are M.M.P.I. profiles of patients clinically diagnosed as psychopathic reaction types. The validation factors render the profiles acceptable. In both cases there was a dramatic drop in the Pd factor on re-testing. These patients had in fact integrated into the non-critical group at the time of re-testing. Fig. 4 demonstrates a further drop in the Pd factor after another 45 days in the relatively stress-free situation.

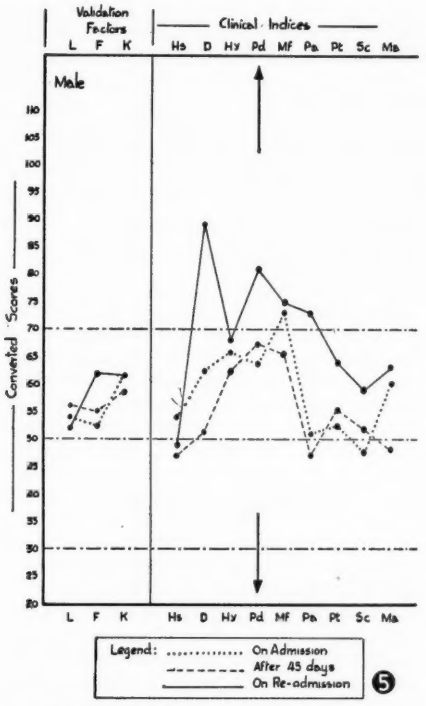


Fig. 5 is the test profile of a patient transferred from a psychiatric hospital to Northlea. He had already spent some weeks in an accepting non-critical environment. As a result no significant Pd rise was manifest. The interesting feature is the rise in Pd shown on retesting after a relapse into his drinking habits and a consequent reactivation of the hostile and rejecting attitudes of his family.

CONCLUSION

Both from clinical assessment and the application of a battery of psychological tests it became obvious that there was no absolute correlation between alcoholism and psychopathic personality. While the percentage of psychopathic personality deviates in the alcoholic community is considerably higher than in the general population, the practice of labelling all alcoholics as psychopathic personalities is misleading and dangerous and obviates the development of adequate therapy.

Of those patients in the sample who gave an initial psychopathic response, 28% were psychopathic personalities whereas 72% were of the psychopathic reaction type. The alcoholic therefore much more frequently falls into the diagnosis 'psychopathic reaction type' than 'psychopathic deviate'.

There is a marked distinction between the psychopathic personality (which, in our opinion, results from an inherent defect and is closely related to other psychotic illnesses) and the psychopathic reaction type (whose responses are a manifestation of non-adjustive behaviour to stressful situations and thus more closely related to the neuroses). We would like to emphasize that the behaviour of the psychopathic personality as we envisage it is a constant manifestation in all life situations, whereas the psychopathic reaction type is revealed merely as a response to stress.

The differentiation between the two diagnoses is of the utmost significance both in prognosis and therapy.

OPSOMMING

Daar bestaan heelwat verwarring oor die verband tussen psigopatie en alkoholisme.

Ondersoekwerk wat by die ‚Northlea Retreat' gedoen is, het 'n tot dusver onherkende entiteit aan die lig gebring wat ten nouste met 'n psigopatiese persoonlikheid ooreenstem, maar tog duidelik daarvan onderskei kan word.

Die uitdrukking ‚psigopatiese reaksie-tipe' is ontwerp vir gevalle wat vóór-toelatingsgedrag, kenmerkend van die psigopatiese persoonlikheidstipe, openbaar, maar tog die vermoë besit om hulle op 'n doeltreffende wyse aan te pas by die omgewing waarin hul terapie plaasvind.

Kliniese skattings sowel as die toepassing van 'n hele reeks psigologiese toetse het duidelik aangetoon dat daar geen absolute korrelasie tussen alkoholisme en psigopatiese persoonlikheid is nie. Terwyl die persentasie psigopatiese persoonlikheidsafwykendes in die alkoholiese gemeenskap heelwat groter is as onder die algemene bevolking, is die gewoonte om alle alkoholiste as psigopatiese persoonlikhede te bestempel, misleidend en gevaarlik, en verhinder dit doeltreffende terapie.

Van die pasiënte wat 'n aanvanklike psigopatiese reaksie getoon het, was 28% psigopatiese persoonlikhede, terwyl 72% van die psigopatiese reaksietipe was. Die alkoholis kan derhalwe veel meer dikwels as 'n ‚psigopatiese reaksie-tipe' as 'n ‚psigopatiese afwykende' gediagnoseer word.

Daar is 'n opvallende verskil tussen die psigopatiese persoonlikheid (wat, volgens ons mening, dikwels die gevolg van 'n inherente defek, en ten nouste aan ander psigopatiese siektes verwant is) en die psigopatiese reaksie-tipe (wie se reaksies 'n manifestasie is van gedrag wat nie by moeilike omstandighede aangepas kan word nie, en dus nouer aan die neuroses verwant is). Ons wil graag nadruk daarop lê dat die gedrag van die psigopatiese persoonlikheid, soos ons dit sien, 'n gedurige manifestasie in alle omstandighede van die lewe is, terwyl die psigopatiese reaksie-tipe bloot as 'n reaksie op spanning geopenbaar word.

Die verskil tussen die twee diagnoses is van die allergrootste belang sowel vir prognose as vir terapie.

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THE ACTION OF VIADRIL (P-55) IN DOGS

AN EXPERIMENTAL STUDY

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Selye has drawn attention to the hypnotic effect of certain steroids and Laubach and his co-workers, after investigating the narcotic properties, toxicity, etc. of a number of these substances, found that 21-hydroxy-pregnanedione sodium succinate appeared to offer the greatest promise as an anaesthetic agent. This drug, to which the name Viadril has been given, has also been investigated clinically by Murphy and others in the Department of Anaesthesiology of the University of California.

Viadril has been used intravenously for basal narcosis, in human subjects, in doses of 1-1.5 g. (about 15-20 mg. per Kg.), given slowly into a drip in 2½% solution. The original clinical investigators, after using the drug in 125 cases, were impressed with its merit and concluded that it offered useful possibilities in anaesthesia. It is classified as a true anaesthetic, this assessment being based on its capacity to control pain, obtund reflexes, produce muscular relaxation and produce sleep, all without depression of vital functions.[1]

There is, however, some evidence that Viadril is a somewhat potent intravascular irritant for, despite precautions to administer it in dilute solution, Murphy[1] mentions 3 cases of thrombophlebitis in his series. Perhaps even more disquieting is the finding of haemoglobinuria in dogs after its use. These factors seemed to indicate a cautious approach so that, despite the considerable clinical trial which Viadril had already undergone, it was felt advisable to pursue the matter further before employing it on patients.

A supply of Viadril was kindly made available by Pfizer Laboratories South Africa Ltd., and, by the courtesy of Dr. K. F. Mills, the Medical Superintendent of the Johannesburg Hospital and Prof. W. E. Underwood (Head of the Department of Surgery in the University of the Witwatersrand) the Department of Anaesthesia was authorized to make a further investigation.

This investigation is concerned mainly with the effect of Viadril on the kidney, but such opportunities as presented themselves were taken to observe its effects on respiration and haemodynamics and to compare its anaesthetic properties with the methods normally used in this unit for experimental anaesthesia.

EXPERIMENTAL DATA

This work was carried out in the Department of Surgery of the University of the Witwatersrand (in part in association with operations under the Nuffield Cardiac Research Unit).

Viadril (in 2½% solution) was administered to dogs both in association with other agents and in an attempt to use it as the main anaesthetic. In making up solutions it was noticed that, at room temperature, the white powder dissolved with some difficulty, giving a frothy solution with a soapy feel, rather like a domestic detergent. Unless the solution is heated, the soapy bubbles take a considerable time to disappear, but this expedient was not considered admissible in view of possible decomposition.

The effect of the drug on the kidneys was studied by urinalysis and by histological examination of kidney biopsies, this being the most important part of the investigation. The effect on respiration was also observed and, in some of the animals, spirometer readings were taken. In most of the experiments, arterial and venous catheters were passed and connected to a Sanborn Strain Gauge Recorder so that any effects on the haemodynamics could be recorded. Electrocardiographic records were also taken. Where methods of anaesthesia other than Viadril were used, the standard technique which has been found satisfactory by the Department of Anaesthesia for experimental work in dogs was followed:

The intravenous administration of nembutal sodium, 1 grain per 10 lb. body weight (half the normal dose for veterinary surgery) with

scoline 0.5 mg. per lb. body weight. The scoline is repeated as required in progressively diminishing doses. Except where otherwise stated, premedication consisted of atropine gr. 1/100.

Eight dogs, varying in weight from 40 to 65 lb., were used and all these animals were also the subjects of other surgical experimental investigations. This limited facilities for making observations but perhaps enabled a better assessment of the action of the drug to be formed under actual operating conditions. It would appear from the literature submitted by Pfizer Laboratories that no operative procedures took place on their experimental animals; certainly no mention was made of them. These circumstances enhanced the difficulty of planning the work and, to some extent, opportunities for making the required observations had to be taken as they presented themselves. The more important experimental data has been set out briefly with each experiment and will be reviewed at the conclusion.

Dog 1: *Male, 47 lb.*

Operation: *Nylon Graft to Thoracic Aorta.* Anaesthesia was induced with nembutal and scoline, and catheters were placed in the carotid artery, the inferior vena cava and the femoral veins. Viadril 100 mg. was then given rapidly into the femoral vein and the effect noted on the arterial and venous pressures, and on the E.C.G. There was no significant change in any of these tracings.

Later, after time had been allowed for full normal respiration to return, a further 400 mg. Viadril were administered without producing any appreciable effect on the arterial or venous pressures.

Dog 2: *Male, 65 lb.*

Operation: *Insertion of Hufnagel Valve.* Anaesthesia was induced with nembutal and scoline and catheters were placed in the superior vena cava and the carotid and femoral arteries. Spirometer readings were also taken in this animal. When full normal respiration had been resumed, 500 mg. of Viadril were given into the superior vena cava and the effect on the arterial and venous blood pressures, and on respiration, were observed. As in the previous experiment, there were no significant changes in the circulation. Apnoea developed 4 minutes after the injection and the respiration remained depressed for a further 10 minutes. Although the respiration was sluggish, it was difficult to control by hyperventilation and it was necessary to administer further amounts of scoline to secure good operating conditions.

Dog 3: *Male, 41 lb.* In very poor general condition.

Operation: *Experimental Portocaval Shunt.* Anaesthesia was induced with nembutal and scoline and catheters were placed in the carotid artery and in the superior vena cava. After adequate spontaneous respiration had returned, spirometer and blood pressure tracings were taken and 600 mg. Viadril (33 mg. per Kg.) were administered into the superior vena cava. This produced apnoea within 2 minutes but no significant change in either arterial or venous blood pressure.

Two specimens of urine were taken, the first immediately after the administration of the Viadril and the second an hour later. Both specimens showed protein, red blood cells, pus cells and spermatozoa. In the second specimen there was a marked increase in all these elements.

Spontaneous respiration never returned after the administration of the Viadril and the dog died about an hour later. The condition of the animal deteriorated so rapdily after the administration of the Viadril that it was impossible to proceed far with the operation.

At autopsy a severe pyonephrosis of the right kidney was found which was probably largely responsible for the reactions observed.

Dog 4: *Male, 46 lb.*

Operation: *Portocaval Investigation and Femoral Artery Graft.* In this experiment an attempt was first made to determine the effect of Viadril in the absence of other agents. One gramme of Viadril was given slowly into an intravenous drip, following which respiration was markedly depressed. Reflexes were brisk and, although the animal was intubated with difficulty, it was impossible to operate. A further 1.0 g. of Viadril was then given more rapidly, but still failed to produce satisfactory operating conditions. At this stage the administration of 10 mg. of scoline instantly gave perfect muscular relaxation and permitted the operation to proceed with controlled respiration.

This animal developed pulmonary oedema, probably as the result of the administration of an excessive quantity of saline, and died 50 minutes after the commencement of the operation.

Urine was passed spontaneously on 2 occasions and both specimens were collected and examined. The first specimen was passed shortly before the administration of the second gramme of Viadril and the second specimen just before death. In both cases there were moderate numbers of red blood cells, poly-

morphs and epithelial cells. The second showed, in addition, a trace of albumin.

In this animal, Viadril 98 mg. per Kg. failed to produce surgical anaesthesia without the supplementary use of muscular relaxants.

Dog 5: *Male, 60 lb.*

Operation: *Femoral Arterial Graft.*

Premedication: Besides atropine, pethidine 50 mg. was given to this animal.

Viadril 750 mg. was rapidly administered intravenously, the dog showing signs of distress during the injection. Following this dose, reflexes remained brisk and it was impossible even to shave the operation site. Nembutal 6 cc. and scoline 25 mg. were then given and satisfactory anaesthesia followed. Half an hour later, when normal respiration had returned, and anaesthesia was becoming too light, the animal received a further 500 mg. Viadril. Respiration was depressed (the maximum effect being reached in 10 minutes) but was not easily controlled by hyperventilation. A catheter specimen of urine was again taken.

On 2 subsequent occasions shivering developed which, in each case, was controlled by 250 mg. Viadril. Each dose was followed by delayed respiratory depression which reached its peak about 10 minutes after the injection. The muscular relaxation after the discontinuation of scoline was not of a high order. A second catheter specimen of urine was taken at the end of the operation (1¾ hours after the first). Both specimens, especially the second, were heavily loaded with red blood cells and also contained spermatozoa.

The results of these experiments are shown in Table 1.

The occurrence of haematuria following the administration of Viadril, in all 3 of the foregoing animals, coupled with similar findings by others, prompted a more direct attempt to investigate the effect of the drug on the kidneys and the ensuing 3 experiments were directed to this end.

Dog 6: *Male, 46 lb.*

Operation: *Laparotomy and Kidney Biopsy.* The dog was anaesthetized with nembutal and scoline and the abdomen opened. A specimen of urine was taken direct from the bladder and a biopsy from the left kidney. Viadril 3 g. (about 150 mg. per Kg.) was then given intravenously. Half an hour after the administration of the Viadril another specimen of urine was taken and a further biopsy was taken from the same kidney. This animal was sacrificed.

The specimens of urine both showed occasional red cells but were otherwise normal. Neither biopsy revealed any abnormality on histological examination.

It was felt that the negative findings in the experiment on Dog 6 might, to some extent, be attributable to insufficient time after the

TABLE 1

Experiment No.	*Total Viadril*	*Urine Analysis (1st Specimen)*	*Urine Analysis (2nd Specimen)*
Dog 3. 41 lb. (Male)	600 mg. (33 mg. per Kg.)	(*Half an Hour after Viadril*) Turbid, yellow, acid. Protein ++ Cells +, spermatozoa and a few red blood cells present.	1½ *Hours after Viadril* Turbid, yellow, acid. Protein ++++ Cells +, spermatozoa and red blood cells in large numbers.
Dog 4. 46 lb. (Male)	2 g. (98 mg. per Kg.)	(*After Viadril 1 g.*) Turbid, yellow, alkaline. Protein absent. Moderate numbers of red blood cells. A few polymorphs and epithelial cells. Amorphous debris.	*After Viadril 2 g.* Similar to 1st specimen, but trace of protein present.
Dog 5. 60 lb. (Male)	1.75 g. (63 mg. per Kg.)	(*After Viadril 1.25 g.*) Turbid, yellow, alkaline. Protein absent. Red blood cells ++ Moderate numbers of pus cells and bladder cells.	*After Viadril 1.75 g.* Red blood cells ++++

administration of the Viadril before the second biopsy was taken. It was therefore decided to repeat the experiment with a longer interval.

Dog 7: Female, 41 lb.

Operation: Laparotomy and Kidney Biopsy. The dog was anaesthetized with nembutal and scoline. Laparotomy carried out and biopsy of left kidney taken. Specimen of urine taken from bladder. The dog was allowed to recover before Viadril 2 g. was given rapidly. Respiratory depression came on slowly and did not reach its peak for half an hour, when the animal had to be intubated and the lungs artificially ventilated; normal respiration returned in 1½ hours.

Twenty-four hours later the abdomen was again opened under nembutal and scoline anaesthesia. The left kidney was removed and another biopsy taken. A specimen of urine also taken.

The first kidney biopsy showed no microscopic abnormality and the corresponding urine was also normal. The biopsy taken 24 hours later, however, showed intense capillovenous congestion with large numbers of eosinophilic hyaline casts in the second convoluted tubules and the collecting tubules. There was hyaline and eosinophilic material in Bowman's space. The urine was heavily loaded with red cells.

Dog 8: Male, 32 lb.

Operation: Laparotomy and Kidney Biopsy and Bilateral Femoral Graft. This experiment was carried out as a control to the previous one. The dog was anaesthetized with nembutal and scoline. The abdomen was opened, a biopsy taken from the left kidney and a specimen of urine from the bladder. Bilateral femoral grafts were then performed and the animal was allowed to recover.

Twenty-four hours later the operation was repeated under the same anaesthesia and a further biopsy taken from the same kidney. A specimen of urine was also taken. Neither biopsy revealed any microscopic abnormality and both the urines were normal.

The results of this series of experiments are summarized in Table 2.

RESULTS

The first 2 experiments (Dogs 1 and 2) were carried out in order to get a general impression of the action of Viadril on the haemodynamics and on the respiration.

A. Effect on Arterial and Venous Blood Pressures. Apart from a very slight fall

TABLE 2

Experiment No.	*Total Viadril*	*Urine Analysis 1st Specimen (Before Viadril)*	*Kidney Biopsy 1st Biopsy (Before Viadril)*
Dog 6 46 lb. (Male)	3 g. (152 mg. per Kg.)	Turbid, yellow, alkaline. Protein absent. Occasional isolated red cells. 2nd specimen (Half an hour after Viadril): No change.	Normal. 2nd biopsy (Half an hour after Viadril): Normal.
Dog 7. 41 lb. (Female)	2 g. (110 mg. per Kg.)	1st specimen (before Viadril): Normal. 2nd specimen (24 hours after Viadril): Haematuria.	1st biopsy (before Viadril): Normal. 2nd biopsy (24 hours after Viadril): Section showed intense capillo-venous congestion with large numbers of eosinophilic, hyaline casts in the second convoluted tubules and the collecting tubules. There was hyaline and eosinophilic material in Bowman's space.
Dog 8. 32 lb. (Male)		1st specimen: Normal. 2nd specimen (Taken at 2nd operation 24 hours later): Normal.	1st biopsy: Normal. 2nd biopsy (24 hours later); Normal.

(imperceptible with small doses) the drug had no significant influence on arterial or venous pressures. These observations were also confirmed on Dogs 3, 4 and 5.

B. Electrocardiogram. No significant change was observed in the electrocardiographic records.

C. Respiration. Viadril was found to cause marked respiratory depression in all cases. Spirometer tracings were taken only in Dogs 2 and 3, but the effect was observed (clinically) in all the other animals to which the drug was administered. There was usually a delay of 10 minutes before the depression became maximal, but in one case (Dog 7) there was a delay of half an hour, following which a further 90 minutes elapsed before the animal could dispense with artificial pulmonary ventilation. Although respiratory depression did not appear to be a dangerous feature in the light of modern anaesthetic technique, the experiments did not convey the impression that Viadril is capable of producing marked reflex depression without interfering with the efficiency of respiration.

VIADRIL AS A VASCULAR IRRITANT

The most disturbing features of the available reports on Viadril are:

(*a*) Its irritant effect on veins used for injection.

(*b*) The occurrence of haematuria in experimental animals.

It was this subject, therefore, that formed the most important part of the investigation. The intensely irritating nature of the drug was evidenced by the fact that 2 of the animals, in which a 2½% solution was injected directly into a vein, showed signs of distress (manifested by howling and whining) although they were, at the time, under basal anaesthesia.

The series of experiments on Dogs 3-8, which are described above and summarized in Tables 1 and 2, indicate that Viadril may be capable of causing serious kidney damage.

DISCUSSION AND CONCLUSIONS

The value of a drug in anaesthesia depends basically on 2 factors:

(*a*) Its clinical utility.

(*b*) Its safety and freedom from undesirable side effects.

(*a*) In attempting to assess the possible clinical utility of Viadril it is necessary to consider the present status of basal anaesthesia. This term is applied to a state of unconsciousness and reflex depression, short of true surgical anaesthesia, which is induced before anaesthesia proper, in such a way that it lasts throughout the surgical procedure and reduces the amount of additional anaesthetic required. The necessary duration of action is determined either by using an agent with a sufficiently slow detoxication time (e.g. sodium nembutal or Viadril) or by administering it in such a way that it is slowly absorbed over the requisite period (e.g. rectal avertin). From the patient's point of view, a comfortable induction of unconsciousness is assured, which is a notable advance compared with the methods previously available. The advantages of basal anaesthesia by single dose methods are not, however, secured without some sacrifice of flexibility which might increase the hazard to the patient and, with modern facilities, it is possible to get better results with greater safety by fractional intravenous administration throughout the operation of agents with a higher detoxication rate. As today comfortable induction is no longer a problem, indications for basal anaesthesia are very much more limited than was the case 20 years ago and a drug would have to possess some outstanding pharmacological advantages to find a place in this field. In the clinical investigation by Murphy *et al.*[1] it was shown to be necessary or advantageous to supplement Viadril anaesthesia with pethidine, nitrous oxide and muscular relaxants.

(*b*) As regards the second factor, the experimental findings were anything but reassuring, even allowing for the fact that the doses employed were, on a weight basis, much higher than those which have been used on human subjects. It is quite possible that even smaller doses might be dangerous in the presence of sub-clinical kidney pathology or in association with shock or anoxia. Dog 3, which was suffering from pyonephrosis and in very poor condition, reacted unfavourably to quite a small dose of Viadril.

As a result of the foregoing observations, which are admittedly far from complete, it was felt to be inadvisable to use Viadril on human subjects without a much more comprehensive biological assay, which would be a major undertaking. While the possibilities of steroid anaesthesia may open up a new and interesting field for research, there does not, at this stage, seem to be any indication that it has any improvements to offer over existing methods.

OPSOMMING

Viadril is 'n steroïed wat belofte as 'n verdowingsmiddel inhou.

Dit is reeds binne-aars gebruik vir basale narkose by die mens. Daar is egter aanduidings dat dit 'n ietwat kragtige intravaskulêre prikkelmiddel is, en hemoglobinurie is by honde opgemerk na die gebruik daarvan. Die middel is derhalwe toe op 8 proefdiere getoets.

Afgesien van 'n baie geringe daling (wat glad nie opgemerk kon word nadat klein dosisse toegedien is nie) het Viadril geen betekenisvolle effek op slagaar- of aar-druk, of op die elektrokardiogram gehad nie.

Dit het egter 'n opvallende asemhalingsdepressie veroorsaak, wat sy hoogtepunt na 'n verposing van ongeveer 10 minute bereik het. In die lig van die moderne anestetiese tegniek het dit nie geskyn asof die asemhalingsdepressie gevaarlik was nie, maar die proefnemings het nie die indruk gewek dat Viadril in staat is om 'n merkbare refleksdepressie teweeg te bring sonder om die asemhalingsdoeltreffendheid te versteur nie.

Mikroskopiese studies het aan die lig gebring dat groot dosisse Viadril ernstige beskadiging van die niere by honde tot gevolg kan hê.

Dit skyn asof 'n veel omvattender biologiese bepaling van die waarde van hierdie steroïed onderneem sal moet word voordat dit vir die mens gebruik word.

Die moontlikhede wat opgesluit lê in 'n steroïedarkose stel 'n nuwe en interessante navorsingsgebied oop; maar op hierdie stadium skyn dit nie asof dit enige verbetering op die bestaande metodes bied nie.

We wish to thank the South African representatives of the Pfizer Laboratories for the donation of Viadril Lot No. 56-142-92 EPD, manufactured 10 June 1955.

Our thanks are also due to Prof. W. E. Underwood for granting us facilities in the Department of Surgery, Messrs. A. J. Leonsins, J. C. Allan and G. R. Crawshaw for their patient surgical co-operation during the experiments; Dr. V. Wilson for the haemodynamic and electrocardiographic survey; Dr. C. Chatgidakis for the pathological reports; and the Misses P. Feinblum and S. Davis and Mr. R. Caunter, technicians in the Department of Surgery, for their services.

We are indebted to Dr. J. C. Nicholson (Chief Anaesthetist) for his encouragement in the preparation of this article.

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NOTES AND NEWS · BERIGTE

Dr. H. Altman, B.Sc., M.B., B.Ch. (Rand), M.R.C.P. (Lond. and Edin.), D.C.H., has commenced practice as a paediatrician at 314-315 Tower Hill, Klein and Kotze Streets, Hillbrow, Johannesburg. (Telephones:— *Rooms*: 44-3148; *Residence*: 40-1144).

* * *

Dr. James Marshall, Dermatologist, formerly of Johannesburg and Pretoria, is now in practice in Cape Town at 610 Netherlands Bank Building, St. George's Street, Cape Town. (Telephones:— *Rooms*: 3-1461; *Residence*: 8-4054).

* * *

Dr. E. M. Higgs, formerly of the Health Centre, Knysna, has been appointed a Registrar at the King Edward VIII Hospital, Durban.

Dr. Higgs assumed duties early in April.

* * *

Dr. Edwin R. Rosenberg, M.B., B.Ch. (Rand), F.R.C.S. (Edin.), and Dr. Harry D. Ritchken, M.B., B.Ch., M.R.C.P. (Edin.), F.R.C.S. (Edin.), have commenced practice as neurosurgeons at the Princess Nursing Home, 69 Esselen St., Hillbrow, Johannesburg. (*Telephones*: 44-2349; 44-4351.)

* * *

Dr. Phyllis Knocker was the first woman in South Africa to receive the degree of Master of Surgery at the recent graduation ceremony held at the University of the Witwatersrand.

Dr. Knocker graduated as M.B., Ch.B. (University of the Witwatersrand) in 1947.

HISTORY OF THE LADY CADE FELLOWSHIP

The Fellowship, which is of the value of £2,500, was established through the energetic initiative of Dr. Maurice Weinbren, of Johannesburg, in memory of the late Lady Cade, who contracted malaria on the way to South Africa while accompanying her husband on a visit to Johannesburg, in his capacity as Visiting Professor of Surgery to the University of the Witwatersrand.

Through the good offices of Prof. W. E. Underwood and Mr. A. Lee McGregor, Sir Stanford Cade agreed to see a number of patients at the Department of Surgery at the Medical School in Johannesburg. These patients contributed £125 to the Department of Surgery in appreciation of Sir Stanford's kindness to them.

The National Cancer Association of South Africa decided to contribute on a £ for £ basis to create a student prize for a cancer essay; this raised the sum of £250. It was felt, however, that a larger sum was required for a fitting memorial to Lady Cade. Sir Stanford Cade's brother in Johannesburg was approached and he and a number of his friends contributed £2,500 towards a Lady Cade memorial; but even this sum could not have supplied sufficient funds for a suitable Fellowship. The National Cancer Association again decided to contribute £ for £.

The British Empire Cancer Campaign was invited to take part in establishing this memorial fellowship. The response was immediate and very generous. The British Empire Cancer Campaign, out of respect for Lady Cade and for the services rendered by Sir Stanford Cade in the cancer field, also decided to contribute on a £ for £ basis *to an unlimited extent*, and advised that a senior Fellowship be created to the value of £2,500 a year, exclusive of the Fellow's travelling expenses to and from England.

A Committee consisting of Dr. M. Weinbren (representing the Executive of the National Cancer

Association of South Africa) and Prof. W. E. Underwood (representing the University of the Witwatersrand) decided, with the approval of the Executive of the National Cancer Association of South Africa, that the Fellowship should be awarded to the most suitable applicant working at any South African University or research institute associated with a university, on condition that the Fellow return to his university or institution so that he could pass on to others the knowledge obtained during his research work overseas.

Dr. A. G. Oettle

Dr. Oettle was elected by a Selection Committee consisting of Prof. W. E. Underwood (the Dean of the Medical School), Mr. Glyn Thomas (Vice-Chancellor of the Witwatersrand University), Dr. B. J. P. Becker (Acting Professor of Pathology at the Witwatersrand Medical School), Dr. M. Weinbren (a member of the Executive of the National Cancer Association of South Africa) and representatives of the British Empire Cancer Campaign.

Dr. Oettle, who will work in the United Kingdom, will devote himself to histopathological and histochemical studies in the diagnosis of cancer.

* * *

Dr. J. A. Louw, M.Med.(Rad.) Pretoria, M.B., Ch.B (Cape Town), has entered into partnership with Dr. F. Gordon Stewart. They will confine their practice to Diagnostic Radiology. (Telephones: — *Rooms*: 22-8100; *Residence*: 62-4997.)

Dr. V. Botoulas

Dr. V. Botoulas of the Department of Medicine, University of the Witwatersrand has been awarded a Cecil John Adams Memorial Trust travelling fellowship for 1956.

Dr. Botoulas (who graduated as M.B., B.Ch. at the University of the Witwatersrand in 1948) will leave for London in July this year.

* * *

Dr. Harris Jackson, of Johannesburg, has been awarded the Barclay Prize for 1956 by the British Institute of Radiology, for his essay entitled *Asymmetry and Growth of the Skull.*

The Prize consists of a medal and a cash award.

* * *

Dr. Jack Penn of Johannesburg, has accepted an invitation from the Gran Magistero del Sovrano Militare Ordine di Malta to attend in Rome an *International Congress for the Defence and the Social Rehabilitation of the Leper.* Dr. Penn will read a paper on a rehabilitation scheme for cured lepers by plastic surgery. The programme agreed upon in Rome will be referred to the World Health Organization.

Dr. Penn left at the beginning of April by air. He will interrupt his flight to visit Dr. Albert Schweitzer's Hospital at Lambaréné. Dr. Schweitzer has invited him to investigate the plastic rehabilitation of his own patients.

Following the Rome meeting Dr. Penn will travel to Israel, where he will spend some time in his capacity as Honorary Visiting Professor of Plastic Surgery at the University of Jerusalem.

After a visit to the United Kingdom, he will return to South Africa at the end of June.

PREPARATIONS AND APPLIANCES

'PULVULES' PENICILLIN-V LILLY

SUSPENSION PENICILLIN-V LILLY (PAEDIATRIC)

(PHENOXYMETHYL PENICILLIN)

Penicillin-V is an entirely new penicillin for oral use, and represents a major change in the molecule of Penicillin G.

Penicillin-V is unique in being almost completely acid resistant, but readily soluble in an alkaline medium.

Clinical studies have revealed that Penicillin-V produces blood levels which are consistently higher and more prolonged than those obtainable with any other form of oral penicillin. In addition, Penicillin-V is more active than Penicillin G against strains of Staphylococcus, including certain strains resistant to Penicillin G. Urine concentrations are double those obtained from the same dose of oral Penicillin G. Penicillin-V is at least as safe as other penicillins.

Clinical Reports: Haussmann and Zischinsky[1] treated 106 patients with oral Penicillin-V. The cases included scarlet fever; lymphadenitis; peritonsillitis; pneumococcal infections; otitis; mastoiditis and pleurisy. In almost every case the authors reported a rapid fall in temperature. They concluded that 'this preparation is in all respects equal to Penicillin G given parenterally'. Schindelmaisser[2] reported: 'It always effected the same results as might be expected from parenteral use.' Sinios[3] used oral Penicillin-V on 31 patients in a scarlet fever ward for the eradication of Streptococci from the nose and throat. In every case, bacteriological follow-up of the nasopharynx gave results identical with those seen in patients treated with other forms of penicillin.

Bowerbank (31 cases)[4] and Dove (24 cases)[5] have reported on their results in a variety of common infections including tonsillitis, otitis media, puerperal mastitis, bronchopneumonia, and in measles prophylaxis. Favourable results were obtained in the great majority of cases.

Indications: 'Pulvules' Penicillin-V may be used to treat almost all bacterial infections due to penicillin-sensitive organisms. In very acute infections an injection of Penicillin G may be given for the first dose; but thereafter oral Penicillin-V may be expected to give the same results as parenteral treatment. Penicillin-V should be of especial value for the prophylaxis of rheumatic fever in patients with a previous history of this disease.

Dosage: In *adults*, the average dose in moderate

infections is one capsule (125 mg.) 3 times daily, increased to 1 capsule 4 or 6 times daily in more serious infections.

In *children* the dose should be determined by the severity of the infection, and often the full adult dosage will be needed. Younger children and infants may be given respectively half and one quarter of the adult dose, in the form of Suspension Penicillin-V Lilly Paediatric, (62.5 mg. per large teaspoonful).

'Pulvules' Penicillin-V Lilly may be given either before or after meals, as they are absorbed efficiently when given in either the fasting or non-fasting state.

Packaging: The 125 mg. 'Pulvules' are available in bottles of 12, 100 and 1,000.

Suspension Penicillin-V (Paediatric) is available in bottles to make 60 c.c. (62.5 mg. per 5 c.c.).

REFERENCES

1. Haussmann, E. and Zischinsky, H. (1953): Wien. Med. Wchnschr., **103**, 725.
2. Schindelmaisser, F. (1954): Wien. Med. Wchnschr., **104**, 369.
3. Sinios, A. (1954): Med. Klin., **49**, 2031.
4. Bowerbank, A. G. (1955): Brit. Med. J., **2**, 1028.
5. Dove, W. L. (1955): Brit Med. J., **2**, 1090.

PREPARATE EN TOESTELLE

By *kinders* word die dosis bepaal deur die erns van die infeksie, en dikwels is die volle volwassenedosis nodig. Jonger kinders en suigelinge kan onderskeidelik die helfte en een-kwart van die dosis vir volwassenes kry—in die vorm van Penicillin-V Lilly, Pediatriese Sweefmengsel (62.5 mg. per groot teelepelvol).

‚Pulvules' Penicillin-V Lilly kan geneem word voor of ná maaltye, want hulle word op 'n doeltreffende manier geabsorbeer as hulle òf in die vastende òf in die nie-vastende toestand toegedien word.

Verpakking: Die ‚Pulvules' van 125 mg. is verkrygbaar in bottels van 12, 100 en 1,000.

Penicillin-V, Pediatriese Sweefmengsel, is verkrygbaar in bottels om 60 k.s. voor te berei (62.5 mg. per 5 k.s.).

VERWYSINGS

1. Haussmann, E. en Zischinsky, H. (1953): Wien. Med. Wchnschr., **103**, 725.
2. Schindelmaisser, F. (1954): Wien. Med. Wchnschr., **104**, 369.
3. Sinios, A. (1954): Med. Klin., **49**, 2031.
4. Bowerbank, A. G. (1955): Brit. Med. J., **2**, 1028.
5. Dove, W. L. (1955): Brit. Med. J., **2**, 1090.

DEQUADIN-TABLETTE

BY DIE PLAASLIKE BEHANDELING VAN INFEKSIES VAN DIE MOND EN KEEL

Die hoë voorkoms van allergiese reaksies op die plaaslike gebruik van antibiotica, gepaard met die feit dat sodanige plaaslike gebruik die pasiënt bes moontlik gevoelig kan maak vir die sistemiese toediening van dieselfde antibioticum op 'n latere tydstip wanneer die nood miskien groter is, is verantwoordelik vir die neiging om, vir sover dit plaaslike aanwending betref, liewer die sintetiese bakteriebestrydende middels as die antibiotica te gebruik. Met die aanbieding van Dequadin ('n nuwe sintetiese bakteriebestryder wat in die navorsingslaboratoriums van Allen & Hanbury ontwikkel is) word 'n vorm van behandeling wat in iedere opsig beter as pensillientablette is, tot beskikking van die geneesheer gestel.

Dequadin — dekametieleen-bis-(4-aminekwinaldinum-chloried)—het 'n breë antimikrobespektrum, en lae konsentrasies strem byna al die bakterieë wat skadelik vir die mens is. Deur oormatige moniliale groei te strem, voorkom Dequadin-tablette die verskyning van sulke toestande soos swarttong en mondelinge spru.

Dequadin-tablette vernietig swamme sowel as bakterieë, en is 'n vinnige en doeltreffende behandeling vir mondelinge spru, insluitende die soort wat aan langdurige antibioticumterapie te wyte is.

Dequadin-tablette word aangedui vir die behandeling van al die mondelinge infeksies wat gewoonlik in die algemene praktyk teëgekom word.

Hierdie toestande sluit die volgende in: Vincent se angina, tonsillitis, seerkeel, mondontsteking, piorree, faringitis, afta-sweertjies, spru en ontsteking van die tong.

Dequadin-tablette is nie-giftig, en kan met veiligheid aan kinders gegee word. Een tablet wat al om die 2 of 3 uur stadig gesuig word, is doeltreffend teen die meeste infeksies van die mond en die keel.

Verkrybaar in flessies van 20 tablette van Allen & Hanburys (Africa) Limited, Durban.

REVIEWS OF BOOKS

RECENT LEGISLATION

Recent Medical and Health Legislation. Supplement to *Medical and Health Legislation in the Union of South Africa.* By E. H. Cluver, K.St.J., E.D., M.A. M.D. (Oxon.), D.P.H. (Eng.), F.R.S.I. (Pp. 348. 1955. 27s. 6d.). Central News Agency Ltd.

Contents: 1. Medical, Dental and Pharmacy Amendment Acts. 2. Rules and Regulations made under the Nursing Act. 3. Regulations under the Food, Drugs and Disinfectants Act. 4. Public Health Amendment Act 44 of 1952, and Amendment Act 36 of 1919. 5. International Sanitary Regulations Act. 6. The Post Mortem Examinations and Removal of Human Tissue Act. 7. The Dental Mechanicians Act.

The numerous admendments in recent years to Acts and Regulations affecting health matters have rendered timely this supplementary account by Dr. E. H. Cluver, who now makes available in convenient form the mass of legislation otherwise inaccessible to the average reader. Dr. Cluver provides a useful commentary, where necessary, of the principal Acts.

This volume is essential for all students and administrators of public health and contains also important legislation and amendments affecting nurses and dental mechanicians.

ABSTRACTS OF DIAGNOSIS AND TREATMENT

J. A. M. A. Clinical Abstracts of Diagnosis and Treatment. Published with the Approval of the Board of Trustees, American Medical Association. Edited by Noah D. Fabricant. (1955. Pp. 627 + vi. $5.50.) New York and London: Intercontinental Medical Book Corporation with Grune & Stratton, Inc.

Every reader of the *Journal of the American Medical Association* is familiar with its useful and popular feature *Medical Literature Abstracts*, culled from more than 1,200 journals.

In this volume (the first of an annual series) Dr. Fabricant (an Editorial Associate of JAMA) has selected summaries limited to diagnosis and treatment, employing the widest possible range of abstracts dealing with these two dominant aspects of clinical practice.

The contents cover Internal Medicine, Surgery, Neurology and Psychiatry, Paediatrics, Gynaecology and Obstetrics, Dermatology, Urology, Ophthalmology, Otolaryngology, Therapeutics, Pathology, Radiology, Anaesthesia and Physiology.

This valuable summary of current clinical events should appeal both to general and specialist practitioners.

South African Medico-Legal Society

P.O. BOX 6434 • JOHANNESBURG

The object of this Society is the promotion of medico-legal knowledge in all its aspects.

This is attained *inter alia* by holding meetings at which papers are read and discussed.

To The Honorary Secretaries,
South African Medico-Legal Society,
P.O. Box 6434,
Johannesburg.

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.....

wish to apply for membership of the South African Medico-Legal Society.

I enclose my cheque for £2. 2. 0, being the subscription for 1 year.

* * *

Medical practitioners are invited to become members of this Society.

* * *

The annual subscription is £2. 2. 0. and entitles members to receive free the *Journal of Forensic Medicine*, published quarterly.

(J3/2H)

A PRACTICAL UP-TO-DATE TABLE OF ANTIDOTES

First Aid: DO THIS FIRST

- Send for a doctor immediately
- Keep the patient warm.
- Determine if patient has taken (1) A POISON: something not meant to be taken internally . . . or (2) AN OVERDOSE: a food or drug taken in excessive quantity.
- While waiting for physician, give appropriate counterdose.
- But do not force any liquids on the patient—if he is unconscious.

To find the correct COUNTERDOSE

- In one of the lists printed at left, find substance causing the trouble.
- Next to that substance is a number. This refers to counterdose bearing same number in the section below.
- Keep all poisons and medicines out of reach of children.

POISONS

Acids 18
Antifreeze 9
Bichloride of mercury 12
Camphor 1
Carbon monoxide 16
Chlorine bleach 8
Cleaning fluids 17
Disinfectant
with chlorine 8
with carbolic acid 6
Food poisoning 11
Gasoline, kerosene 17
Insect & rat poisons
with arsenic 2
with sodium fluoride 14
with phosphorus 5
with DDT 11
with strychnine 15
Iodine tincture 4
Lye 10
Mushrooms 11
Oil of wintergreen 9
Paint (lead) 11
Powder from broken fluorescent tubes 1
Rubbing alcohol 9
Turpentine 17
Washing soda 10

OVERDOSES

Alcohol 9
Barbiturates 3
Belladonna 15
Bromides 11
Codeine 13
Headache & cold compounds 9
Morphine, opium 13
Paregoric 13
'Pep' medicines 2
Salicylates (aspirin) 9
Sleeping medicines 3

1 Induce vomiting with an emetic such as • Tablespoon of mustard, or • Soap & warm water, or • Salt & warm water, or • Finger in throat.	**2** • Give a mixture of 2 tablespoons of powdered burnt toast, 1 spoon milk of magnesia, 4 spoons strong tea. • Induce vomiting. (See #1)
3 • Give mixture as in #2 • Induce vomiting. (See #1) • Give 2 tablespoons epsom salt in 2 glasses of water. • Then give large quantities of hot coffee or strong tea.	**4** • Give 2 oz. thick starch paste—made by mixing cornstarch & water. • Then give 2 oz. salt in quart of warm water. Drink until vomit fluid is clear. • Finally, give glass of milk.
5 • 4 oz. hydrogen peroxide. • 1 tablespoon sodium bicarb in quart of warm water. • Then give 4 oz. mineral oil. Positively do NOT take vegetable or animal oil. • Induce vomiting. (See #1).	**6** • Give 2 tablespoons whiskey in 8 spoons warm water. • Next give glass of milk or white of 2 eggs. • Then give hot tea or strong coffee.
7 • Give mixture as in #2. • Induce vomiting. (See #1) • Tablespoon sodium bicarb in quart of warm water. • Give 2 tablespoons epsom salt in pint of water.	**8** • Give 1 teaspoon of aromatic spirits of ammonia in glass of water. • Hot coffee or strong tea plus egg white.
9 • Give mixture as in #2. • Induce vomiting. (See #1) • Give tablespoon of sodium bicarb in quart of warm water. • Give strong tea or coffee.	**10** • Give 2 tablespoons of vinegar in 2 glasses of water. Then give white of 2 eggs or 2 oz. of olive oil. • Do NOT induce vomiting!
11 • Induce vomiting. (See #1) • Give 2 tablespoons epsom salt in 2 glasses of water. • Then give large quantities of hot coffee or strong tea.	**12** • For each tablet swallowed give white of 2 eggs in glass of milk. • Give mixture as in #2. • 1 oz. epsom salt in pint of water.
13 • Give mixture as in #2. • 2 tablespoons epsom salt in 2 glasses of water. • Keep patient awake.	**14** • Give 2 tablespoons of milk of magnesia. • Give glass of milk. • Induce vomiting. (See #1)
15 • Give mixture as in #2. • Induce vomiting. (See #1) • Give artificial respiration if necessary.	**16** • Rush victim into fresh air. • Make patient lie down. • Hot coffee or strong tea.
17 • Induce vomiting. (See #1) • Give 4 oz. mineral oil. • Hot coffee or strong tea.	**18** • Give 1 oz. milk of magnesia in large quantity of water. • Do NOT induce vomiting!

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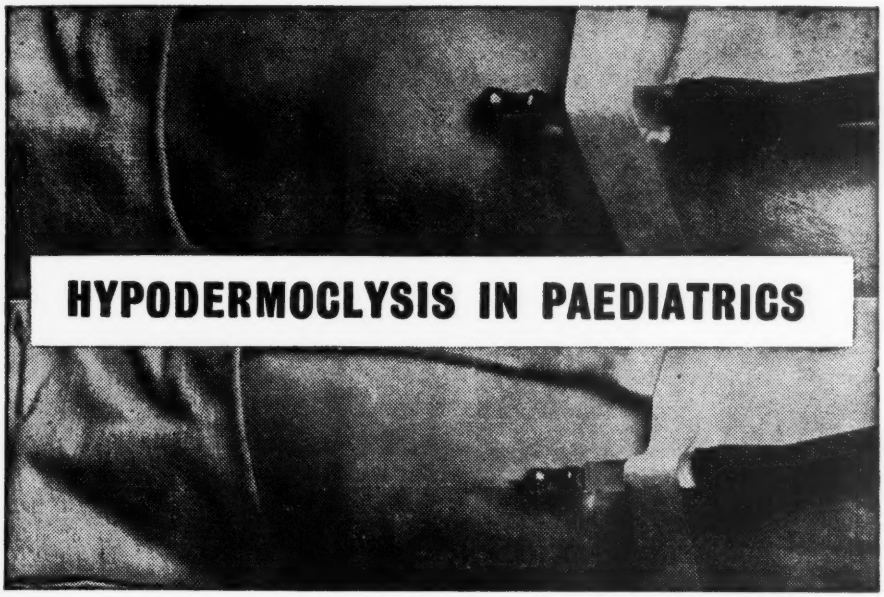
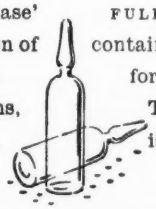


(UPPER) *Without Hyalase* (LOWER) *With Hyalase*

INTRAVENOUS THERAPY may often be difficult owing to the inaccessibility of suitable veins or the restlessness of the child. Subcutaneous administration must be undertaken.

A CLEAR CASE FOR 'HYALASE', the enzyme hyaluronidase. 'Hyalase' enhances the spread and absorption of fluids given by the subcutaneous route. Large volumes of solutions, such as glucose, sodium chloride, etc., can be given quickly and painlessly by this method. 'Hyalase' may be injected into the site, or injected through the tubing of the giving-set at the commencement of infusion.



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